

PUBLIC NOTICE

Vibrantz Specialty Products, LLC has applied to the Tennessee Department of Environment and Conservation, Division of Air Pollution Control for renewal of their major source (Title V) operating permit subject to the provisions of Tennessee Air Pollution Control Regulations 1200-03-09-.02(11) (Title V Regulations). A major source operating permit is required by both the Federal Clean Air Act and Tennessee's air pollution control regulations. However, it should be noted that this facility has a current major source operating permit.

The applicant is **Vibrantz Specialty Products, LLC** with a site address of 795 Foote Lane New Johnsonville, TN 37134. They have applied for renewal of their existing major source (Title V) operating permit for their Electrolytic Manganese Dioxide operation.

EPA has agreed to treat this draft Part 70 permit as a proposed Part 70 permit and to perform its 45-day review provided by the law concurrently with the public notice period. If any substantive comments are received, EPA's 45-day review period will cease to be performed concurrently with the public notice period. In this case, EPA's 45-day review period will start once the public notice period has been completed and EPA receives notification from the Tennessee Air Pollution Control Division that comments have been received and resolved. The status regarding EPA's 45-day review of these permits and the deadline for submitting a citizen's petition can be found at the following website address:

<https://www.epa.gov/caa-permitting/tennessee-proposed-title-v-permits>

Copies of the application materials and draft permits are available for public inspection during normal business hours at the following locations:

Nashville Environmental Field Office
Division of Air Pollution Control
711 R.S. Gass Blvd
Nashville, TN 37216

and

Tennessee Department of Environment and Conservation
Division of Air Pollution Control
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor
Nashville, TN 37243

Electronic copies of the draft permits are available by accessing the TDEC internet site located at:

<https://www.tn.gov/environment/ppo-public-participation/ppo-public-participation/ppo-air.html>

Questions concerning the source(s) may be addressed to Derek Briggs at (615) 532-0550 or by e-mail at Derek.Briggs@tn.gov.

Interested parties are invited to review these materials and comment. In addition, a public hearing may be requested at which written or oral presentations may be made. To be considered, written comments or requests for a public hearing must be received no later than 4:30 PM on **June 10, 2023**. To assure that written comments are received and addressed in a timely manner, written comments must be submitted using one of the following methods:

1. **Mail, private carrier, or hand delivery:** Address written comments to Ms. Michelle W. Owenby, Director, Division of Air Pollution Control, William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue 15th Floor, Nashville, Tennessee 37243.
2. **E-mail:** Submit electronic comments to air.pollution.control@tn.gov.

A final determination will be made after weighing all relevant comments.

Individuals with disabilities who wish to review information maintained at the above-mentioned depositories should contact the Tennessee Department of Environment and Conservation to discuss any auxiliary aids or services needed to facilitate such review. Such contact may be in person, by writing, telephone, or other means, and should be made no less than ten days prior to the end of the public comment period to allow time to provide such aid or services. Contact the Tennessee Department of Environment and Conservation ADA Coordinator, William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue 22nd Floor, Nashville, TN 37243, 1-(866)-253-5827. Hearing impaired callers may use the Tennessee Relay Service, 1-(800)-848-0298.

PROPOSED TITLE V PERMIT STATEMENT (RENEWAL)

Facility Name: Vibrantz Specialty Products
City: New Johnsonville
County: Humphreys
Date of Renewal Application: May 2, 2022
Date Application Deemed Complete: May 10, 2022
Emission Source Reference No.: 43-0021
Renewal Permit No. 580350

INTRODUCTION

This narrative is being provided to assist the reader in understanding the content of the attached Title V operating permit. This Title V Permit Statement is written pursuant to Tennessee Air Pollution Control Rule 1200-03-09-.02(11)(f)1.(v). The primary purpose of the Title V operating permit is to consolidate and identify existing state and federal air requirements applicable to **Vibrantz Specialty Products LLC** and to provide practical methods for determining compliance with these requirements. The following narrative is designed to accompany the Title V operating permit. It initially describes the facility receiving the permit, then the applicable requirements and their significance, and finally the compliance status with those applicable requirements. This narrative is intended only as an adjunct for the reviewer and has no legal standing. Any revisions made to the permit in response to comments received during the public participation process will be described in an addendum to this narrative.

Acronyms

PSD – Prevention of Significant Deterioration
NESHAP – National Emission Standards for Hazardous Air Pollutants
NSPS – New Source Performance Standards
MACT – Maximum Achievable Control Technology
NSR – New Source Review

I. Identification Information

A. Source Description

Manufacture of Manganese Dioxide and Manganese Products:

- 01:** Ore Preparation Process
- 02:** Ore Reduction Process
- 04:** Special Product Processing (CIR Product)
- 08:** Lime System
- 09:** Final Product Blending & Storage
- 10:** Product Crushing, Milling, Drying, and Packaging
- 11:** Four (4) Power/Utility Boilers, Natural Gas/Fuel Oil Fired
- 17:** Digestion and Purification Process
- 18:** Electrolytic Cells Process
- 20:** Steel Shot Blast Cleaning Operation
- 24:** Five (5) Diesel-Fired NSPS Emergency Engines
- 25:** Five (5) Diesel-Fired and One (1) Natural Gas-Fired NESHAP Emergency Engines

B. Facility Classification

1. Attainment or Non-Attainment Location

Area is designated as an attainment area for all criteria pollutants.

2. Company is located in a Class II area. This means that the facility is not located within a national park or national wilderness area; see 40 CFR 52.21(e) for complete definition.

C. Regulatory Status

1. PSD/NSR

This facility is considered as a major source for PSD purposes; this facility is listed as SIC code 28 for Chemical Process Plants at 1200-03-09-.01(4) Prevention of Significant Air Quality Deterioration (PSD).

2. Title V Major Source Status by Pollutant:

Pollutant	Is the pollutant emitted?	If emitted, what is the facility's status?
		Major Source Status
PM	yes	yes
PM₁₀	yes	yes
SO₂	yes	yes
VOC	yes	no
NO_x	yes	yes
CO	yes	yes
Individual HAP	yes	yes
Total HAPs	yes	yes
GHG	yes	no

3. MACT Standards

The Vibrantz Specialty Products LLC facility located in New Johnsonville, TN manufactures manganese dioxide (MnO₂). This source is an existing Title V facility. This facility *would* be subject to 40 CFR 63 Subpart VVVVVV – National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources if it were an Area Source for HAP. The company indicates that they are classified as NAICS code **325188**, “Inorganic Chemical Manufacturing”. This category of facility is excluded in the rule above. Also, this Division has determined that Vibrantz Specialty Products LLC (MnO₂) facility is not subject to 40 CFR 63 Subpart FFFF – National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing. Therefore, there are no MACT or GACT regulations that apply to this facility.

A letter dated **April 4, 2011**, has been sent to EPA, requesting concurrence with the Division's determination of MACT/GACT applicability determination for this facility. In the letter dated **May 26, 2011**, to the Division, EPA has made a determination that this facility is not subject to MACT/GACT standards. A copy of the Division's letter and EPA response letter has been included in the **Attachment 4** of this renewal permit.

The following units at the facility are subject to 40 CFR 63 Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters.

43-0021-02: Ore Reducing Furnaces – Natural gas heating units only

43-0021-11: Four (4) Power/Utility Boilers, Natural Gas/Fuel Oil Fired

The following units at the facility are subject to 40 CFR 63 Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

43-0021-24: Five (5) Diesel-Fired NSPS Emergency Engines

43-0021-25: Five (5) Diesel-Fired and One (1) Natural Gas-Fired NESHAP Emergency Engines

4. Program Applicability

Are the following programs applicable to the facility?

PSD – **no**

NESHAP – **yes**

NSPS – **yes**

II. Compliance Information

A. Compliance Status

Is the facility currently in compliance with all applicable requirements?

The only compliance issue concerns the plant wide natural gas usage limit specified at **Condition E3-6** of permit 580350. This is only a concern as the facility has agreed to a plant-wide natural gas usage limit of 880,985,050 standard cubic feet per consecutive 12-month period for the purpose of PSD avoidance. This emission limit is established pursuant to TAPCR 1200-03-07-.01(5), the construction permit application dated February 27, 2015, additional information dated April 29, 2015, and Construction Permit 969961P dated July 27, 2015.

Are there any applicable requirements that will become effective during the permit term?

Existing boilers and any new and existing process heaters will need to comply with MACT Subpart DDDDD requirements. Existing and new emergency engines will need to comply with MACT Subpart ZZZZ requirements and NSPS Subpart IIII for new engines.

III. Other Requirements

A. Emissions Trading

The facility is not involved in an emission trading program.

B. Acid Rain Requirements

This facility is not subject to any requirements in Title IV of the Clean Air Act.

C. Prevention of Accidental Releases

Not applicable

D. PSD/BACT

Not applicable

E. CAM Applicability (Continuous Assurance Monitoring)

Sources **43-0021-02**: Ore Reduction Process – Note that CAM will continue to apply to the existing calciner/reduction furnace control system during the period when the new baghouse filter is installed, but there will not be an effective minimum pressure drop requirement until the permit has been modified through administrative amendment of other modification to incorporate this limit – and **43-0021-10**: Product Crushing, Milling, Drying and

Packaging of Manganese Dioxide) at this facility are subject to **40 CFR Part 64 – Compliance Assurance Monitoring (CAM)** for manganese compounds as particulate matter.

The following sources are not subject to CAM requirements:

43-0021-01: Ore Preparation Process – potential HAP emissions are below 10 tons per year.

43-0021-04: Special Product Processing (CIR Product) – potential HAP emissions are below 10 tons per year.

43-0021-08: Lime System – potential PM emissions are below the 100-ton threshold.

43-0021-09: Final Product Blending & Storage – potential PM emissions are below the 100-ton threshold.

43-0021-11: Four (4) Power/Utility Boilers – these are uncontrolled.

43-0021-17: Digestion and Purification Process – no control, no HAP emissions.

43-0021-18: Electrolytic Cells Process – no control, no HAP emissions.

43-0021-20: Shot Blast Cleaning Operation – potential HAP emissions are below 10 tons per year.

43-0021-24: NSPS Emergency Engines – these are uncontrolled.

43-0021-25: NESHAP Emergency Engines – these are uncontrolled.

IV. Public Participation Procedures

This proposed renewal permit was mailed to the following environmental agencies:

1. EPA, Region 4
2. Kentucky Division of Air Quality
3. Metro Nashville Health Department

Public Participation Important Dates:

EPA concurrent review requested	<u>Yes</u>
Public Notice publication date	<u>May 10, 2023</u>
Public Notice period completion date	<u>June 10, 2023</u>
Public Notice publication comments	<u>TBD</u>
EPA review period completion date	<u>TBD</u>
EPA review comments	<u>TBD</u>

V. Emissions Information

Facility-wide Allowable Emissions by Source Number

Source ID	PM ¹ – Tons/Year	SO ₂ - Tons/Year	CO- Tons/Year	VOC- Tons/Year	NO _x - Tons/Year	NO _x +NMHC- Tons/Year	H ₂ SO ₄ - Tons/Year	Fugitive PM ¹ - Tons/Year	H ₂ S- Tons/Year
01: Ore Preparation Process	7.62								
02: Ore Reduction Process	21.63	159.43			8.94			9.55	
04: Special Product Processing (CIR Product)	1.13								
08: Lime System	8.45								
09: Final Product Blending & Storage	0.66								
10: Product Crushing, Milling, Drying, and Packaging	29.26							11.39	
11: Four (4) NG Power/Utility Boilers	6.13	0.44			78.40				
17: Digestion and Purification Process									4.38
18: Electrolytic Cells Process							8.89		
20: Steel Shot Blast Cleaning Operation	2.45								
24: 5 Emergency Engines	0.08		1.31			1.27			
25: 6 Emergency Engines	0.33	0.25							
Total	77.79	160.12	1.31		87.34²		8.89	20.94	4.38

1) Total PM (PM + Fugitive PM) is 98.73 tons per year.

2) Facility wide allowable NO_x is higher than what the facility can actually emit due to facility wide Natural Gas limitation of 880,985,050 scf per 12-consecutive months. With Natural Gas limit NO_x PTE is 44.05 tons per 12-consecutive months.

Note – under 1200-03-31-.02 of the TAPCR, manganese compounds are a HAP. All PM from this source where Mn compounds are present is considered to be HAP as a worst-case estimate.

Maximum PM HAP is calculated at **66.22** tons per year Mn compounds.

Facility-wide GHG Emissions

Pollutant (s)	POTENTIAL EMISSIONS TONS PER 12-MONTH BASIS
GHG	48,066 tons CO ₂ e*

*Provided by the facility.

Background calculations for fee table

VI. Review of NSPS and MACT Applicability for Various Sources

43-0021-01: Ground Ore Grinding Dust Collection System with a maximum process weight rate of 35,000 pounds per hour, utilizing a natural gas-fired pre-heater for drying, 7.1 MMBtu/hour. Cyclone with cartridge dust collector control system (10,148 dscfm)

Applicability of Subpart LL (NSPS)

Source 43-0021-01 is not subject to 40 CFR 60 Subpart LL – Standards of Performance for Metallic Mineral Processing Plants because it utilizes material which has already been processed at another (offsite) facility (this site is not an open pit-mine). APC Compliance Validation indicated that it would be impractical to bring material onsite that had not already had the metallic portion concentrated.

§60.380 Applicability and designation of affected facility.

- (a) The provisions of this subpart are applicable to the following affected facilities in metallic mineral processing plants: Each crusher and screen in open-pit mines; each crusher, screen, bucket elevator, conveyor belt transfer point, thermal dryer, product packaging station, storage bin, enclosed storage area, truck loading station, truck unloading station, railcar loading station, and railcar unloading station at the mill or concentrator with the following exceptions. All facilities located in underground mines are exempted from the provisions of this subpart. At uranium ore processing plants, all facilities subsequent to and including the beneficiation of uranium ore are exempted from the provisions of this subpart.
- (b) An affected facility under paragraph (a) of this section that commences construction or modification after August 24, 1982, is subject to the requirements of this part.

43-0021-02: Ground Ore Furnace Dust Collector – ground manganese dioxide ore and coal are fed to eight (8) electric reduction furnaces/calciners where manganese dioxide ore is reduced to manganese oxide. Coal or natural gas would serve as the reducing agent. Also, this process consists of storage, drying and pulverizing of coal.

Applicability of Subpart Y (NSPS)

Source 43-0021-02 is not subject to 40 CFR 60 Subpart Y – Standards of Performance for Coal Preparation and Processing Plants because it only processes a maximum of 2.5 tons per hour (60 tons per day) which is below the applicability threshold for Subpart Y as stated below.

§60.250 Applicability and designation of affected facility.

- (a) The provisions of this subpart apply to affected facilities in coal preparation and processing plants that process more than 181 megagrams (Mg) (200 tons) of coal per day.

Applicability of Subpart DDDDD (MACT)

This facility is a major source for HAPs, and the natural gas heating system for the two (2) natural gas reducing furnaces at **43-0021-02** (but not the coal-supplied reducing units) are subject to this rule. Note – the coal dryer at **43-0021-02** is not subject to Subpart DDDDD because the products of natural gas combustion contact the coal directly.

Source 43-0021-04: CIR Dust Collector – CIR product grinding, handling, and packaging. Grinding, screening, washing, drying, and bagging of manganese ore with bag filter control.

Applicability of Subpart UUU (NSPS)

Source 43-0021-04 is not subject to 40 CFR 60 Subpart UUU – Standards of Performance for Calciners and Dryers in Mineral Industries because the grinder also serves to dry the material being processed.

§60.730 Applicability and designation of affected facility.

- (a) The affected facility to which the provisions of this subpart apply is each calciner and dryer at a mineral processing plant. Feed and product conveyors are not considered part of the affected facility. For the brick and related clay products industry, only the calcining and drying of raw materials prior to firing of the brick are covered.
- (b) An affected facility that is subject to the provisions of Subpart LL – Metallic Mineral Processing Plants, is not subject to the provisions of this subpart. Also, **the following processes and process units used at mineral processing plants are not subject to the provisions of this subpart:** vertical shaft kilns in the magnesium compounds industry; the chlorination-oxidation process in the titanium dioxide industry; coating kilns, mixers, and aerators in the roofing granules industry; and tunnel kilns, tunnel dryers, apron dryers, and **grinding equipment that also dries the process material** used in any of the 17 mineral industries (as defined in §60.731, “Mineral processing plant”).

Source 43-0021-11: Four (4) Boilers – Three (3) fire tube and one (1) water tube natural gas-fired boilers.

Applicability of Subpart DDDDD (MACT)

Source 43-0021-11 is subject to 40 CFR 63 Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters.

VII. Permit History

A. The original Title V permit (#546419) was issued on July 23, 2004.

- 1. Administrative Amendment #1 was issued on December 1, 2004. The purpose of this amendment was to include specific minimum pressure drop values for baghouses at sources 43-0021-01, 43-0021-02, 43-0021-04, 43-0021-09, and 43-0021-10.
- 2. Minor Modification #1 was issued on June 20, 2008. The purpose of this modification was to replace the current ball mill ore grinder with a new ring/roll mill grinder system.
- 3. Minor Modification #2 was issued on December 31, 2008. The purpose of this modification was to replace the Jaw Crusher baghouse (10A) of source 43-0021-10 with a new cartridge filter collector unit.

B. Title V renewal permit (#562614) was issued on December 14, 2011.

- 1. Minor Modification #1 was issued on July 16, 2012. The purpose of this modification was to replace the Milling System baghouse (10C) of source 43-0021-10 with a new baghouse. The previous baghouse had a flowrate of 30,000 dscfm, and the new control system has a flow rate of 10,000 dscfm, however, the company requested to keep the old allowable particulate emission rate of 6.68 lbs/hr.
- 2. Minor Modification #2 was issued on January 21, 2015. The purpose of this modification was for the addition of two (2) new Calciner Ore reduction furnaces. The two new units use natural gas as a reducing agent and also for process heat.

3. Minor Modification #3 was issued on August 14, 2015. The purpose of this modification was for the replacement of an existing cartridge collector filter for source 43-0021-02 with a baghouse of similar volumetric exhaust flow.
 4. Administrative Amendment #1 was issued December 28, 2015. The purpose of this amendment was to reduce the minimum pressure drop values for the cartridge collector filter for source 43-0021-02 from 5.0 inches to 2.5. Additionally, the 12-month natural gas usage limit of 880,985,000 cubic feet from construction permit #969961P was included in this amendment.
 5. Administrative Amendment #2 was issued January 15, 2016. The purpose of this amendment was to fix a typographical error in condition E2(b) and also updated the text for Annual Compliance Certification in condition E5-6.
- C. Title V renewal permit (#571742) was issued October 30, 2017. Condition A8 and E1 updated to include the new fee language. MACT Subpart DDDDD reporting revised in Condition E2(c). Removed the fuel oil requirements from Source 11. Add MACT Subpart DDDDD work practice requirements to Conditions E5-16 (Source 02) and E10-9 (Source 11). Add Source 24 and 25 (emergency engines).
1. Administrative Amendment #1 was issued May 28, 2019. The purpose of this amendment was to change the name of the facility from Prince Erachem Inc. to Prince Specialty Products LLC per the letter dated March 29, 2019.
- D. Title V renewal permit (#580350) was issued TBD. Change the name of the facility from Prince Specialty Products LLC to Vibrantz Specialty Products LLC per the letter dated November 15, 2022. Conditions A1 through E2 updated to include new standard language. Added Condition E3-10 Insignificant Activities. Added Attachment 5 APC 36 form for emission fee election schedule. Removed Conditions E5-16 and E5-17 per request from facility dated February 6, 2023. Fixed minor grammatical issues and formatting.

TENNESSEE AIR POLLUTION CONTROL BOARD
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243



PROPOSED OPERATING PERMIT (TITLE V) Issued Pursuant to Tennessee Air Quality Act

This permit fulfills the requirements of Title V of the Federal Clean Air Act (42 U.S.C. 7661a-7661e) and the federal regulations promulgated thereunder at 40 CFR Part 70. (FR Vol. 57, No. 140, Tuesday, July 21, 1992, p.32295-32312). This permit is issued in accordance with the provisions of paragraph 1200-03-09-.02(11) of the Tennessee Air Pollution Control Regulations (TAPCR). The permittee has been granted permission to operate an air contaminant source in accordance with emissions limitations and monitoring requirements set forth herein.

Date Issued: TBD, 2023

Permit Number
580350

Date Expires: TBD, 2028

Issued To:

Vibrantz Specialty Products LLC

Installation Address:

795 Foote Lane
New Johnsonville

Installation Description:

Manufacture of Manganese Dioxide and Manganese Products:

01: Ore Preparation Process

02: Ore Reduction Process

04: Special Product Processing (CIR Product)

08: Lime System

09: Final Product Blending & Storage

10: Product Crushing, Milling, Drying, and Packaging

11: Four (4) Power/Utility Boilers, Natural Gas (NSPS & NESHAP)

17: Digestion and Purification Process

18: Electrolytic Cells Process

20: Steel Shot Blast Cleaning Operation

24: Five (5) Emergency Engines (NSPS)

25: Six (6) Emergency Engines (NESHAP)

Facility ID: 43-0021

Renewal Application Due Date:

Between TBD, 2028 and TBD, 2028

Primary SIC: 2819 & 3313
NAICS Code: 325188

Information Relied Upon:

Renewal Application dated May 2, 2022 (Title V permit #571742)

(Continued on the next page)

TECHNICAL SECRETARY

No Authority is Granted by this Permit to Operate, Construct, or Maintain any Installation in Violation of any Law, Statute, Code, Ordinance, Rule, or Regulation of the State of Tennessee or any of its Political Subdivisions.

POST AT INSTALLATION ADDRESS

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ATTACHMENTS

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ATTACHMENT 2	AP-42 Fifth Edition Tables for Natural Gas	5 Pages
ATTACHMENT 3	Requirements of Compliance Assurance Monitoring (CAM)	2 Pages
ATTACHMENT 4	Division's MACT applicability request dated April 4, 2011, to EPA, and EPA Applicability determination letter for Subpart VVVV and MACT Rule 40 CFR 63 Subpart FFFF dated May 26, 2011	3 Pages
ATTACHMENT 5	Title V Fee Selection – APC 36	2 Pages

SECTION A

GENERAL PERMIT CONDITIONS

A permit issued under the provisions of paragraph 1200-03-09-.02(11) is a permit issued pursuant to the requirements of Title V of the Federal Act and its implementing Federal regulations promulgated at 40 CFR, Part 70.

- A1. Definitions.** Terms not otherwise defined in the permit shall have the meaning assigned to such terms in the referenced regulation.

TAPCR 1200-03

- A2. Compliance requirement.** All terms and conditions in a permit issued pursuant to paragraph 1200-03-09-.02(11) including any provisions designed to limit a source's potential to emit, are enforceable by the Administrator and citizens under the Federal Act.

The permittee shall comply with all conditions of its permit. Except for requirements specifically designated herein as not being federally enforceable (State Only), non-compliance with the permit requirements is a violation of the Federal Act and the Tennessee Air Quality Act and is grounds for enforcement action; for a permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. Non-compliance with permit conditions specifically designated herein as not being federally enforceable (State Only) is a violation of the Tennessee Air Quality Act and may be grounds for these actions.

TAPCR 1200-03-09-.02(11)(e)2(i) and 1200-03-09-.02(11)(e)1(vi)(I)

- A3. Need to halt or reduce activity.** The need to halt or reduce activity is not a defense for noncompliance. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. However, nothing in this item shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in assessing penalties for noncompliance if the health, safety or environmental impacts of halting or reducing operations would be more serious than the impacts of continuing operations.

TAPCR 1200-03-09-.02(11)(e)1(vi)(II)

- A4. The permit.** The permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

TAPCR 1200-03-09-.02(11)(e)1(vi)(III)

- A5. Property rights.** The permit does not convey any property rights of any sort, or any exclusive privilege.

TAPCR 1200-03-09-.02(11)(e)1(vi)(IV)

- A6. Submittal of requested information.** The permittee shall furnish to the Technical Secretary, within a reasonable time, any information that the Technical Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or termination of the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Technical Secretary copies of records required to be kept by the permit. If the permittee claims that such information is confidential, the Technical Secretary may review that claim and hold the information in protected status until such time that the Board can hear any contested proceedings regarding confidentiality disputes. If the information is desired by EPA, the permittee may mail the information directly to EPA. Any claims of confidentiality for federal purposes will be determined by EPA.

TAPCR 1200-03-09-.02(11)(e)1(vi)(V)

A7. Severability clause. The requirements of this permit are severable. A dispute regarding one or more requirements of this permit does not invalidate or otherwise excuse the permittee from their duty to comply with the remaining portion of the permit.

TAPCR 1200-03-09.02(11)(e)1(v)

A8. Fee payment.

(a) The permittee shall pay an annual Title V emission fee based upon the responsible official's choice of actual emissions, allowable emissions, or a combination of actual and allowable emissions; and on the responsible official's choice of annual accounting period. An emission cap of 4,000 tons per year per regulated pollutant per major source SIC Code shall apply to actual or allowable based emission fees. A Title V annual emission fee will not be charged for emissions in excess of the cap. Title V annual emission fees will not be charged for carbon monoxide or for greenhouse gas pollutants solely because they are greenhouse gases.

(b) Title V sources shall pay allowable based emission fees until the beginning of the next annual accounting period following receipt of their initial Title V operating permit. At that time, the permittee shall begin paying their Title V fee based upon their choice of actual or allowable based fees, or mixed actual and allowable based fees. Once permitted, the Responsible Official may revise their existing fee choice by submitting a written request to the Division no later than December 31 of the annual accounting period for which the fee is due.

(c) When paying annual Title V emission fees, the permittee shall comply with all provisions of 1200-03-26-.02 and 1200-03-09-.02(11) applicable to such fees.

(d) Where more than one (1) allowable emission limit is applicable to a regulated pollutant, the allowable emissions for the regulated pollutants shall not be double counted. Major sources subject to the provisions of paragraph 1200-03-26-.02(9) shall apportion their emissions as follows to ensure that their fees are not double counted.

1. Sources that are subject to federally promulgated hazardous air pollutant under 40 CFR 60, 61, or 63 will place such regulated emissions in the regulated hazardous air pollutant (HAP) category.

2. A category of miscellaneous HAPs shall be used for hazardous air pollutants listed at part 1200-03-26-.02(2)(i)12 that are not subject to federally promulgated hazardous air pollutant standards under 40 CFR 60, 61, or 63.

3. HAPs that are also in the family of volatile organic compounds, particulate matter, or PM₁₀ shall not be placed in either the regulated HAP category or miscellaneous HAP category.

4. Sources that are subject to a provision of chapter 1200-03-16 New Source Performance Standards (NSPS) or chapter 0400-30-39 Standards of Performance for New Stationary Sources for pollutants that are neither particulate matter, PM₁₀, sulfur dioxide (SO₂), volatile organic compounds (VOC), nitrogen oxides (NO_x), or hazardous air pollutants (HAPs) will place such regulated emissions in an NSPS pollutant category.

5. The regulated HAP category, the miscellaneous HAP category, and the NSPS pollutant category are each subject to the 4,000-ton cap provisions of subparagraph 1200-03-26-.02(2)(i).

6. Major sources that wish to pay annual emission fees for PM₁₀ on an allowable emission basis may do so if they have a specific PM₁₀ allowable emission standard. If a major source has a total particulate emission standard but wishes to pay annual emission fees on an actual PM₁₀ emission basis, it may do so if the PM₁₀ actual emission levels are proven to the satisfaction of the Technical Secretary. The method to demonstrate the actual PM₁₀ emission levels must be made as part of the source's major source operating permit in advance in order to exercise this option. The PM₁₀ emissions reported under these options shall not be subject to fees under the family of particulate emissions. The 4,000-ton cap provisions of subparagraph 1200-03-26-.02(2)(i) shall also apply to PM₁₀ emissions.

TAPCR 1200-03-26-.02 and 1200-03-09-.02(11)(e)1(vii)

A9. Permit revision not required. A permit revision will not be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or process for changes that are provided for in the permit.

TAPCR 1200-03-09-.02(11)(e)1(viii)

A10. Inspection and entry. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Technical Secretary or an authorized representative to perform the following for the purposes of determining compliance with the permit applicable requirements:

(a) Enter upon, at reasonable times, the permittee's premises where a source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

- (c) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
- (d) As authorized by the Clean Air Act and Chapter 1200-03-10 of TAPCR, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.
- (e) "Reasonable times" shall be considered to be customary business hours unless reasonable cause exists to suspect noncompliance with the Act, Division 1200-03 or any permit issued pursuant thereto and the Technical Secretary specifically authorizes an inspector to inspect a facility at any other time.

TAPCR 1200-03-09-.02(11)(e)3.(ii)

A11. Permit shield.

- (a) Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements as of the date of permit issuance, provided that:
 - 1. Such applicable requirements are included and are specifically identified in the permit; or
 - 2. The Technical Secretary, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.
- (b) Nothing in this permit shall alter or affect the following:
 - 1. The provisions of section 303 of the Federal Act (emergency orders), including the authority of the Administrator under that section. Similarly, the provisions of T.C.A. §68-201-109 (emergency orders) including the authority of the Governor under the section;
 - 2. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
 - 3. The applicable requirements of the acid rain program, consistent with section 408(a) of the Federal Act; or
 - 4. The ability of EPA to obtain information from a source pursuant to section 114 of the Federal Act.
- (c) Permit shield is granted to the permittee.

TAPCR 1200-03-09-.02(11)(e)6

A12. Permit renewal and expiration.

- (a) An application for permit renewal must be submitted at least 180 days, but no more than 270 days prior to the expiration of this permit. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted.
- (b) If the permittee submits a timely and complete application for permit renewal the source will not be considered to be operating without a permit until the Technical Secretary takes final action on the permit application, except as otherwise noted in paragraph 1200-03-09-.02(11).
- (c) This permit, its shield provided in Condition A11, and its conditions will be extended and effective after its expiration date provided that the source has submitted a timely, complete renewal application to the Technical Secretary.

TAPCR 1200-03-09-.02(11)(f)2 and 3, 1200-03-09-.02(11)(d)1(i)(III), and 1200-03-09-.02(11)(a)2

A13. Reopening for cause.

- (a) A permit shall be reopened and revised prior to the expiration of the permit under any of the circumstances listed below:
 - 1. Additional applicable requirements under the Federal Act become applicable to the sources contained in this permit provided the permit has a remaining term of 3 or more years. Such a reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the permit expiration date of this permit, unless the original has been extended pursuant to 1200-03-09-.02(11)(a)2.
 - 2. Additional requirements become applicable to an affected source under the acid rain program.
 - 3. The Technical Secretary or EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
 - 4. The Technical Secretary or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
- (b) Proceedings to reopen and issue a permit shall follow the same proceedings as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists, and not the entire permit. Such reopening shall be made as expeditiously as practicable.
- (c) Reopenings for cause shall not be initiated before a notice of such intent is provided to the permittee by the Technical Secretary at least 30 days in advance of the date that the permit is to be reopened except that the Technical Secretary may provide

a shorter time period in the case of an emergency. An emergency shall be established by the criteria of T.C.A. 68-201-109 or other compelling reasons that public welfare is being adversely affected by the operation of a source that is in compliance with its permit requirements.

(d) If the Administrator finds that cause exists to terminate, modify, or revoke and reissue a permit as identified in A13, he is required under federal rules to notify the Technical Secretary and the permittee of such findings in writing. Upon receipt of such notification, the Technical Secretary shall investigate the matter in order to determine if he agrees or disagrees with the Administrator's findings. If he agrees with the Administrator's findings, the Technical Secretary shall conduct the reopening in the following manner:

1. The Technical Secretary shall, within 90 days after receipt of such notification, forward to EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate. If the Administrator grants additional time to secure permit applications or additional information from the permittee, the Technical Secretary shall have the additional time period added to the standard 90-day time period.
2. EPA will evaluate the Technical Secretary's proposed revisions and respond as to their evaluation.
3. If EPA agrees with the proposed revisions, the Technical Secretary shall proceed with the reopening in the same manner prescribed under Condition A13 (b) and Condition A13 (c).
4. If the Technical Secretary disagrees with either the findings or the Administrator that a permit should be reopened or an objection of the Administrator to a proposed revision to a permit submitted pursuant to Condition A13(d), he shall bring the matter to the Board at its next regularly scheduled meeting for instructions as to how he should proceed. The permittee shall be required to file a written brief expressing their position relative to the Administrator's objection and have a responsible official present at the meeting to answer questions for the Board. If the Board agrees that EPA is wrong in their demand for a permit revision, they shall instruct the Technical Secretary to conform to EPA's demand, but to issue the permit under protest preserving all rights available for litigation against EPA.

TAPCR. 1200-03-09-.02(11)(f)6 and 7.

A14. Permit transference. An administrative permit amendment allows for a change of ownership or operational control of a source where the Technical Secretary determines that no other change in the permit is necessary, provided that the following requirements are met:

- (a) Transfer of ownership permit application is filed consistent with the provisions of 1200-03-09-.03(6), and
- (b) written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee has been submitted to the Technical Secretary.

TAPCR 1200-03-09-.02(11)(f)4(i)(IV) and 1200-03-09-.03(6)

A15. Air pollution alert. When the Technical Secretary has declared that an air pollution alert, an air pollution warning, or an air pollution emergency exists, the permittee must follow the requirements for that episode level as outlined in TAPCR 1200-03-09-.03(1) and TAPCR 1200-03-15-.03.

A16. Construction permit required. Except as exempted in TAPCR 1200-03-09-.04, or excluded in subparagraph TAPCR 1200-03-02-.01(1)(aa) or subparagraph TAPCR 1200-03-02-.01(1)(cc), this facility shall not begin the construction of a new air contaminant source or the modification of an air contaminant source which may result in the discharge of air contaminants without first having applied for and received from the Technical Secretary a construction permit for the construction or modification of such air contaminant source.

TAPCR 1200-03-09-.01(1)(a)

A17. Notification of changes. The permittee shall notify the Technical Secretary 30 days prior to commencement of any of the following changes to an air contaminant source which would not be a modification requiring a construction permit.

- (a) change in air pollution control equipment
- (b) change in stack height or diameter
- (c) change in exit velocity of more than 25 percent or exit temperature of more than 15 percent based on absolute temperature.

TAPCR 1200-03-09-.02(7)

A18. Schedule of compliance. The permittee will comply with any applicable requirement that becomes effective during the permit term on a timely basis. If the permittee is not in compliance the permittee must submit a schedule for coming into compliance which must include a schedule of remedial measure(s), including an enforceable set of deadlines for specific actions.

TAPCR 1200-03-09-.02(11)(d)3 and 40 CFR Part 70.5(c)

A19. Title VI.

(a) The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR, Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in Subpart B:

- 1.** Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to Section 82.156.
- 2.** Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to Section 82.158.
- 3.** Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to Section 82.161.

(b) If the permittee performs a service on motor (fleet) vehicles when this service involves ozone depleting substance refrigerant in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR, Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

(c) The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR, Part 82, Subpart G, Significant New Alternatives Policy Program.

A20. 112 (r). Sources which are subject to the provisions of Section 112(r) of the federal Clean Air Act or any federal regulations promulgated thereunder, shall annually certify in writing to the Technical Secretary that they are properly following their accidental release plan. The annual certification is due in the office of the Technical Secretary no later than January 31 of each year. Said certification will be for the preceding calendar year.

TAPCR 1200-03-32-.03(3)

SECTION B

GENERAL CONDITIONS for MONITORING, REPORTING, and ENFORCEMENT

B1. Recordkeeping. Monitoring and related record keeping shall be performed in accordance with the requirements specified in the permit conditions for each individual permit unit. In no case shall reports of any required monitoring and record keeping be submitted less frequently than every six months.

- (a) Where applicable, records of required monitoring information include the following:
1. The date, place as defined in the permit, and time of sampling or measurements;
 2. The date(s) analyses were performed;
 3. The company or entity that performed the analysis;
 4. The analytical techniques or methods used;
 5. The results of such analyses; and
 6. The operating conditions as existing at the time of sampling or measurement.

(b) Digital data accumulation which utilizes valid data compression techniques shall be acceptable for compliance determination as long as such compression does not violate an applicable requirement and its use has been approved in advance by the Technical Secretary.

TAPCR 1200-03-09-.02(11)(e)1(iii)

B2. Retention of monitoring data. The permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

TAPCR 1200-03-09-.02(11)(e)1(iii)(II)II

B3. Reporting. Reports of any required monitoring and record keeping shall be submitted to the Technical Secretary in accordance with the frequencies specified in the permit conditions for each individual permit unit. Reports shall be submitted within 60 days of the close of the reporting period unless otherwise noted. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official. Reports required under "State only requirements" are not required to be certified by a responsible official.

TAPCR 1200-03-09-.02(11)(e)1(iii)

B4. Certification. Except for reports required under "State Only" requirements, any application form, report or compliance certification submitted pursuant to the requirements of this permit shall contain certification by a responsible official of truth, accuracy and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

TAPCR 1200-03-09-.02(11)(d)4

B5. Annual compliance certification. The permittee shall submit annually compliance certifications with terms and conditions contained in Sections A, B, D and E of this permit, including emission limitations, standards, or work practices. This compliance certification shall include all of the following (provided that the identification of applicable information may cross-reference the permit or previous reports, as applicable):

- (a) The identification of each term or condition of the permit that is the basis of the certification;
- (b) The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period; such methods and other means shall include, at a minimum, the methods and means required by this permit. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Act, which prohibits knowingly making a false certification or omitting material information;
- (c) The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the method or means designated in B5(b) above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion* or exceedance** as defined below occurred; and
- (d) Such other facts as the Technical Secretary may require to determine the compliance status of the source.

* "Excursion" shall mean a departure from an indicator range established for monitoring under this paragraph, consistent with any averaging period specified for averaging the results of the monitoring.

** "Exceedance" shall mean a condition that is detected by monitoring that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) are greater than the applicable emission limitation or standard (or less than the applicable standard in the case of a percent reduction requirement) consistent with any averaging period specified for averaging the results of the monitoring.

40 CFR Part 70.6(c)(5)(iii) as amended in the Federal Register Vol. 79, No.144, July 28, 2014, pages 43661 through 43667

B6. Submission of compliance certification. The compliance certification shall be submitted to:

The Tennessee Department of Environment and Conservation Environmental Field Office specified in Section E of this permit	and	Air Enforcement Branch US EPA Region IV 61 Forsyth Street, SW Atlanta, Georgia 30303
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TAPCR 1200-03-09-.02(11)(e)3(v)(IV)

B7. Emergency provisions. An emergency constitutes an affirmative defense to an enforcement action brought against this source for noncompliance with a technology-based emission limitation due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

(a) The affirmative defense of the emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

1. An emergency occurred, and that the permittee can identify the probable cause(s) of the emergency. "Probable" must be supported by a credible investigation into the incident that seeks to identify the causes and results in an explanation supported by generally accepted engineering or scientific principles.

2. The permitted source was at the time being properly operated. In determining whether or not a source was being properly operated, the Technical Secretary shall examine the source's written standard operating procedures which were in effect at the time of the noncompliance and any other code as detailed below that would be relevant to preventing the noncompliance. Adherence to the source's standard operating procedures will be the test of adequate preventative maintenance, careless operation, improper operation or operator error to the extent that such adherence would prevent noncompliance. The source's failure to follow recognized standards of practice to the extent that adherence to such a standard would have prevented noncompliance will disqualify the source from any claim of an emergency and an affirmative defense.

3. During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.

4. The permittee submitted notice of the emergency to the Technical Secretary according to the notification criteria for malfunctions in rule 1200-03-20-.03. For the purposes of this condition, "emergency" shall be substituted for "malfunction(s)" in rule 1200-03-20-.03 to determine the relevant notification threshold. The notice shall include a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

(b) In any enforcement proceeding the permittee seeking to establish the occurrence of an emergency has the burden of proof.

(c) The provisions of this condition are in addition to any emergency, malfunction or upset requirement contained in Division 1200-03 or other applicable requirement.

TAPCR 1200-03-09-.02(11)(e)7

B8. Excess emissions reporting.

(a) The permittee shall promptly notify the Technical Secretary when any emission source, air pollution control equipment, or related facility breaks down in such a manner to cause the emission of air contaminants in excess of the applicable emission standards contained in Division 1200-03 or any permit issued thereto, or of sufficient duration to cause damage to property or public health. The permittee must provide the Technical Secretary with a statement giving all pertinent facts, including the estimated duration of the breakdown. Violations of the visible emission standard which occur for less than 20 minutes in one day (midnight to midnight) need not be reported. Prompt notification will be within 24 hours of the malfunction and shall be provided by telephone to the Division's Nashville office. The Technical Secretary shall be notified when the condition causing the failure or breakdown has been corrected. In attainment and unclassified areas if emissions other than from sources designated as significantly impacting on a nonattainment area in excess of the standards will not and do not occur over more than a 24-hour period (or will not recur over more than a 24-hour period) and no damage to property and or public health is anticipated, notification is not required.

(b) Any malfunction that creates an imminent hazard to health must be reported by telephone immediately to the Division's Nashville office at (615) 532-0554 and to the State Civil Defense.

(c) A log of all malfunctions, startups, and shutdowns resulting in emissions in excess of the standards in Division 1200-03 or any permit issued thereto must be kept at the plant. All information shall be entered in the log no later than twenty-four (24) hours after the startup or shutdown is complete, or the malfunction has ceased or has been corrected. Any later discovered corrections can be added in the log as footnotes with the reason given for the change. This log must record at least the following:

1. Stack or emission point involved
2. Time malfunction, startup, or shutdown began and/or when first noticed
3. Type of malfunction and/or reason for shutdown
4. Time startup or shutdown was complete or time the air contaminant source returned to normal operation
5. The company employee making entry on the log must sign, date, and indicate the time of each log entry

The information under items 1. and 2. must be entered into the log by the end of the shift during which the malfunction or startup began. For any source utilizing continuous emission(s) monitoring, continuous emission(s) monitoring collection satisfies the above log keeping requirement.

TAPCR 1200-03-20-.03 and .04

B9. Malfunctions, startups and shutdowns - reasonable measures required. The permittee must take all reasonable measures to keep emissions to a minimum during startups, shutdowns, and malfunctions. These measures may include installation and use of alternate control systems, changes in operating methods or procedures, cessation of operation until the process equipment and/or air pollution control equipment is repaired, maintaining sufficient spare parts, use of overtime labor, use of outside consultants and contractors, and other appropriate means. Failures that are caused by poor maintenance, careless operation or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions. This provision does not apply to standards found in 40 CFR, Parts 60(Standards of performance for new stationary sources), 61(National emission standards for hazardous air pollutants) and 63(National emission standards for hazardous air pollutants for source categories).

TAPCR 1200-03-20-.02

B10. Reserved.

B11. Report required upon the issuance of a notice of violation for excess emissions. The permittee must submit within twenty (20) days after receipt of the notice of violation, the data required below. If this data has previously been available to the Technical Secretary prior to the issuance of the notice of violation no further action is required of the violating source. However, if the source desires to submit additional information, then this must be submitted within the same twenty (20) day time period. The minimum data requirements are:

- (a) The identity of the stack and/or other emission point where the excess emission(s) occurred;
- (b) The magnitude of the excess emissions expressed in pounds per hour and the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;
- (c) The time and duration of the emissions;
- (d) The nature and cause of such emissions;
- (e) For malfunctions, the steps taken to correct the situation and the action taken or planned to prevent the recurrence of such malfunctions;
- (f) The steps taken to limit the excess emissions during the occurrence reported, and
- (g) If applicable, documentation that the air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good operating practices for minimizing emissions.

Failure to submit the required report within the twenty (20) day period specified shall preclude the admissibility of the data for determination of potential enforcement action.

TAPCR 1200-03-20-.06(2), (3) and (4)

SECTION C

PERMIT CHANGES

- C1. Operational flexibility changes.** The source may make operational flexibility changes that are not addressed or prohibited by the permit without a permit revision subject to the following requirements:
- (a) The change cannot be subject to a requirement of Title IV of the Federal Act or Chapter 1200-03-30.
 - (b) The change cannot be a modification under any provision of Title I of the federal Act or Division 1200-03.
 - (c) Each change shall meet all applicable requirements and shall not violate any existing permit term or condition.
 - (d) The source must provide contemporaneous written notice to the Technical Secretary and EPA of each such change, except for changes that are below the threshold of levels that are specified in Rule 1200-03-09-.04.
 - (e) Each change shall be described in the notice including the date, any change in emissions, pollutants emitted, and any applicable requirements that would apply as a result of the change.
 - (f) The change shall not qualify for a permit shield under the provisions of part 1200-03-09-.02(11)(e)6.
 - (g) The permittee shall keep a record describing the changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes. The records shall be retained until the changes are incorporated into subsequently issued permits.

TAPCR 1200-03-09-.02(11)(a)4 (ii)

- C2. Section 502(b)(10) changes.**
- (a) The permittee can make certain changes without requiring a permit revision, if the changes are not modifications under Title I of the Federal Act or Division 1200-03 and the changes do not exceed the emissions allowable under the permit. The permittee must, however, provide the Administrator and Technical Secretary with written notification within a minimum of 7 days in advance of the proposed changes. The Technical Secretary may waive the 7-day advance notice in instances where the source demonstrates in writing that an emergency necessitates the change. Emergency shall be demonstrated by the criteria of TAPCR 1200-03-09-.02(11)(e)7 and in no way shall it include changes solely to take advantages of an unforeseen business opportunity. The Technical Secretary and EPA shall attach each such notice to their copy of the relevant permit.
 - (b) The written notification must be signed by a facility Title V responsible official and include the following:
 - 1. a brief description of the change within the permitted facility;
 - 2. the date on which the change will occur;
 - 3. a declaration and quantification of any change in emissions;
 - 4. a declaration of any permit term or condition that is no longer applicable as a result of the change; and
 - 5. a declaration that the requested change is not a Title I modification and will not exceed allowable emissions under the permit.
 - (c) The permit shield provisions of TAPCR 1200-03-09-.02(11)(e)6 shall not apply to Section 502(b)(10) changes.

TAPCR 1200-03-09-.02(11)(a)4 (i)

- C3. Administrative amendment.**
- (a) Administrative permit amendments to this permit shall be in accordance with 1200-03-09-.02(11)(f)4. The source may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request.
 - (b) The permit shield shall be extended as part of an administrative permit amendment revision consistent with the provisions of TAPCR 1200-03-09-.02(11)(e)6 for such revisions made pursuant to item (c) of this condition which meet the relevant requirements of TAPCR 1200-03-09-.02(11)(e), TAPCR 1200-03-09-.02(11)(f) and TAPCR 1200-03-09-.02(11)(g) for significant permit modifications.
 - (c) Proceedings to review and grant administrative permit amendments shall be limited to only those parts of the permit for which cause to amend exists, and not the entire permit.

TAPCR 1200-03-09-.02(11)(f)4

- C4. Minor permit modifications.**
- (a) The permittee may submit an application for a minor permit modification in accordance with TAPCR 1200-03-09-.02(11)(f)5(ii).
 - (b) The permittee may make the change proposed in its minor permit modification immediately after an application is filed with the Technical Secretary.
 - (c) Proceedings to review and modify permits shall be limited to only those parts of the permit for which cause to modify exists, and not the entire permit.

- (d) Minor permit modifications do not qualify for a permit shield.

TAPCR 1200-03-09-.02(11)(f)5(ii)

C5. Significant permit modifications.

(a) The permittee may submit an application for a significant modification in accordance with TAPCR 1200-03-09-.02(11)(f)5(iv).

(b) Proceedings to review and modify permits shall be limited to only those parts of the permit for which cause to modify exists, and not the entire permit.

TAPCR 1200-03-09-.02(11)(f)5(iv)

C6. New construction or modifications.

Future construction at this facility that is subject to the provisions of TAPCR 1200-03-09-.01 shall be governed by the following:

(a) The permittee shall designate in their construction permit application the route that they desire to follow for the purposes of incorporating the newly constructed or modified sources into their existing operating permit. The Technical Secretary shall use that information to prepare the operating permit application submittal deadlines in their construction permit.

(b) Sources desiring the permit shield shall choose the administrative amendment route of TAPCR 1200-03-09-.02(11)(f)4 or the significant modification route of TAPCR 1200-03-09-.02(11)(f)5(iv).

(c) Sources desiring expediency instead of the permit shield shall choose the minor permit modification procedure route of TAPCR 1200-03-09-.02(11)(f)5(ii) or group processing of minor modifications under the provisions of TAPCR 1200-03-09-.02(11)(f)5(iii) as applicable to the magnitude of their construction.

TAPCR 1200-03-09-.02(11)(d) 1(i)(V)

SECTION D

GENERAL APPLICABLE REQUIREMENTS

- D1. Visible emissions.** With the exception of air emission sources exempt from the requirements of TAPCR Chapter 1200-03-05 and air emission sources for which a different opacity standard is specifically provided elsewhere in this permit, the permittee shall not cause, suffer, allow or permit discharge of a visible emission from any air contaminant source with an opacity in excess of twenty (20) percent for an aggregate of more than five (5) minutes in any one (1) hour or more than twenty (20) minutes in any twenty-four (24) hour period; provided, however, that for fuel burning installations with fuel burning equipment of input capacity greater than 600 million btu per hour, the permittee shall not cause, suffer, allow, or permit discharge of a visible emission from any fuel burning installation with an opacity in excess of twenty (20) percent (6-minute average) except for one six minute period per one (1) hour of not more than forty (40) percent opacity. Sources constructed or modified after July 7, 1992, shall utilize 6-minute averaging.
- Consistent with the requirements of TAPCR Chapter 1200-03-20, due allowance may be made for visible emissions in excess of that permitted under TAPCR 1200-03-05 which are necessary or unavoidable due to routine startup and shutdown conditions. The facility shall maintain a continuous, current log of all excess visible emissions showing the time at which such conditions began and ended and that such record shall be available to the Technical Secretary or an authorized representative upon request.
- TAPCR 1200-03-05-.01(1), TAPCR 1200-03-05-.03(6) and TAPCR 1200-03-05-.02(1)
- D2. General provisions and applicability for non-process gaseous emissions.** Any person constructing or otherwise establishing a non-portable air contaminant source emitting gaseous air contaminants after April 3, 1972, or relocating an air contaminant source more than 1.0 km from the previous position after November 6, 1988, shall install and utilize the best equipment and technology currently available for controlling such gaseous emissions.
- TAPCR 1200-03-06-.03(2)
- D3. Non-process emission standards.** The permittee shall not cause, suffer, allow, or permit particulate emissions from non-process sources in excess of the standards in TAPCR 1200-03-06.
- D4. General provisions and applicability for process gaseous emissions.** Any person constructing or otherwise establishing an air contaminant source emitting gaseous air contaminants after April 3, 1972, or relocating an air contaminant source more than 1.0 km from the previous position after November 6, 1988, shall install and utilize equipment and technology which is deemed reasonable and proper by the Technical Secretary.
- TAPCR 1200-03-07-.07(2)
- D5. Particulate emissions from process emission sources.** The permittee shall not cause, suffer, allow, or permit particulate emissions from process sources in excess of the standards in TAPCR 1200-03-07.
- D6. Sulfur dioxide emission standards.** The permittee shall not cause, suffer, allow, or permit Sulfur dioxide emissions from process and non-process sources in excess of the standards in TAPCR 1200-03-14. Regardless of the specific emission standard, new process sources shall utilize the best available control technology as deemed appropriate by the Technical Secretary of the Tennessee Air Pollution Control Board.
- D7. Fugitive Dust.**
- (a) The permittee shall not cause, suffer, allow, or permit any materials to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, but not be limited to, the following:
1. Use, where possible, of water or chemicals for control of dust in demolition of existing buildings or structures, construction operations, grading of roads, or the clearing of land;
 2. Application of asphalt, water, or suitable chemicals on dirt roads, material stockpiles, and other surfaces which can create airborne dusts;

3. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting or other similar operations.

(b) The permittee shall not cause, suffer, allow, or permit fugitive dust to be emitted in such manner to exceed five (5) minutes per hour or twenty (20) minutes per day as to produce a visible emission beyond the property line of the property on which the emission originates, excluding malfunction of equipment as provided in Chapter 1200-03-20.

TAPCR 1200-03-08

D8. Open burning. The permittee shall comply with the TAPCR 1200-03-04 for all open burning activities at the facility.

TAPCR 1200-03-04

D9. Asbestos. Where applicable, the permittee shall comply with the requirements of TAPCR 1200-03-11-.02(2)(d) when conducting any renovation or demolition activities at the facility.

TAPCR 1200-03-11-.02(2)(d) and 40 CFR, Part 61

D10. Annual certification of compliance. The generally applicable requirements set forth in Section D of this permit are intended to apply to activities and sources that are not subject to source-specific applicable requirements contained in State of Tennessee and U.S. EPA regulations. By annual certification of compliance, the permittee shall be considered to meet the monitoring and related record keeping and reporting requirements of TAPCR 1200-03-09-.02(11)(e)1.(iii) and 1200-03-10-.04(2)(b)1 and compliance requirements of TAPCR 1200-03-09-.02(11)(e)3.(i). The permittee shall submit compliance certification for these conditions annually.

D11. Emission Standards for Hazardous Air Pollutants. When applicable, the permittee shall comply with the TAPCR 0400-30-38 for all emission sources subject to a requirement contained therein.

TAPCR 0400-30-38

D12. Standards of Performance for New Stationary Sources. When applicable, the permittee shall comply with the TAPCR 0400-30-39 for all emission sources subject to a requirement contained therein.

TAPCR 0400-30-39

D13. Gasoline Dispensing Facilities. When applicable, the permittee shall comply with the TAPCR 1200-03-18-.24 for all emission sources subject to a requirement contained therein.

D14. Internal Combustion Engines.

- (a) All stationary reciprocating internal combustion engines, including engines deemed insignificant activities and insignificant emission units, shall comply with the applicable provisions of TAPCR 0400-30-38-.01.
- (b) All stationary compression ignition internal combustion engines, including engines deemed insignificant activities and insignificant emission units, shall comply with the applicable provisions of TAPCR 0400-30-39-.01.
- (c) All stationary spark ignition internal combustion engines, including engines deemed insignificant activities and insignificant emission units, shall comply with the applicable provisions of TAPCR 0400-30-39-.02.

TAPCR 0400-30-38 and 39

SECTION E

SOURCE SPECIFIC EMISSION STANDARDS, OPERATING LIMITATIONS, and MONITORING, RECORDKEEPING and REPORTING REQUIREMENTS

43-0021	Facility Description:	Vibrantz Specialty Products LLC manufactures electrolytic manganese dioxide and other manganese ore products.
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Conditions E1 through E3-9 apply to all sources in Section E of this permit unless otherwise noted.

E1. Fee payment

FEE EMISSIONS SUMMARY TABLE FOR MAJOR SOURCE 43-0021

REGULATED POLLUTANTS	ALLOWABLE EMISSIONS (tons per AAP)	ACTUAL EMISSIONS (tons per AAP)	COMMENTS
PARTICULATE MATTER (PM)	101.54	AEAR	Includes all fee emissions.
PM₁₀	N/A	N/A	
SO₂	160.12	AEAR	Includes all fee emissions.
VOC	N/A	N/A	
NO_x	87.34	AEAR	Includes all fee emissions.
NO_x+NMHC	1.27	AEAR	Includes all fee emissions.
CATEGORY OF MISCELLANEOUS HAZARDOUS AIR POLLUTANTS (HAPs WITHOUT A STANDARD) *			
VOC FAMILY GROUP	N/A	N/A	Fee emissions are included in VOC above.
NON-VOC GASEOUS GROUP	N/A	N/A	
PM FAMILY GROUP	N/A	N/A	Fee emissions are included in PM above.
CATEGORY OF SPECIFIC HAZARDOUS AIR POLLUTANTS (HAPs WITH A STANDARD) **			
VOC FAMILY GROUP	N/A	N/A	
NON-VOC GASEOUS GROUP	N/A	N/A	
PM FAMILY GROUP	N/A	N/A	
CATEGORY OF NSPS POLLUTANTS NOT LISTED ABOVE***			
EACH NSPS POLLUTANT NOT LISTED ABOVE	4.38 H₂S 8.89 H₂SO₄	AEAR	Source 43-0021-17 Source 43-0021-18 Fee emissions are not included above. NSPS does not apply to this source for these pollutants.

NOTES

AAP The Annual Accounting Period (AAP) is a 12 consecutive month period that either (a) begins each July 1st and ends June 30th of the following year when fees are paid on a fiscal year basis, or (b) begins January 1st and ends December 31st of the same year when paying on a calendar year basis. The Annual Accounting Period at the time of permit renewal issuance began **July 1, 2022** and ends **June 30, 2023**. The next Annual Accounting Period begins **July 1, 2023** and ends **June 30, 2024** unless a request to change the annual accounting period is submitted by the responsible official as required by subparagraph 1200-03-26-.02(9)(b) of the TAPCR and approved by the Technical Secretary. If the permittee wishes to revise their annual accounting period or their annual emission fee basis as allowed by subparagraph 1200-03-26-.02(9)(b) of the TAPCR, the responsible official must submit the request to the Division in writing on or before December 31 of the annual accounting period for which the fee is due. If a change in fee basis from allowable emissions to actual emissions for any pollutant is requested, the request from the responsible official must include the methods that will be used to determine actual emissions. Changes in fee bases must be made using the Title V Fee Selection form, form number APC 36 (CN-1583), included as an attachment to this permit and available on the Division of Air Pollution Control's website.

N/A N/A indicates that no emissions are specified for fee computation.

AEAR If the permittee is paying annual emission fees on an actual emissions basis, **AEAR** indicates that an **Actual Emissions Analysis** is **Required** to determine the actual emissions of:

- (1) **each regulated pollutant** (Particulate matter, SO₂, VOC, NO_x and so forth. See TAPCR 1200-03-26-.02(2)(i) for the definition of a regulated pollutant.),
- (2) **each pollutant group** (VOC Family, Non-VOC Gaseous, and Particulate Family),
- (3) the **Miscellaneous HAP Category**,
- (4) the **Specific HAP Category**, and
- (5) the **NSPS Category**

under consideration during the **Annual Accounting Period**.

* **Category Of Miscellaneous HAP (HAP Without a Standard):** This category is made-up of hazardous air pollutants that do not have a federal or state standard. Each HAP is classified into one of three groups, the **VOC Family** group, the **Non-VOC Gaseous** group, or the **Particulate (PM) Family** group. **For fee computation**, the **Miscellaneous HAP Category** is subject to the 4,000-ton cap provisions of subparagraph 1200-03-26-.02(2)(i) of the TAPCR.

** **Category Of Specific HAP (HAP With a Standard):** This category is made-up of hazardous air pollutants (HAP) that are subject to Federally promulgated Hazardous Air Pollutant Standards that can be imposed under Chapter 1200-03-11 or Chapter 1200-03-31. Each individual hazardous air pollutant is classified into one of three groups, the **VOC Family** group, the **Non-VOC Gaseous** group, or the **Particulate (PM) Family** group. **For fee computation**, each individual hazardous air pollutant of the **Specific HAP Category** is subject to the 4,000-ton cap provisions of subparagraph 1200-03-26-.02(2)(i) of the TAPCR.

*** **Category Of NSPS Pollutants Not Listed Above:** This category is made-up of each New Source Performance Standard (NSPS) pollutant whose emissions are not included in the **PM, SO₂, VOC or NO_x** emissions from each source in this permit. **For fee computation**, each **NSPS pollutant not listed above** is subject to the 4,000-ton cap provisions of subparagraph 1200-03-26-.02(2)(i) of the TAPCR.

END NOTES

-
- The permittee shall:**
- (1) Pay Title V **annual emission fees**, on the emissions and year bases requested by the responsible official and approved by the Technical Secretary, for each annual accounting period (AAP) by the payment deadline(s) established in TAPCR 1200-03-26-.02(9)(g). Fees may be paid on an **actual, allowable, or mixed** emissions basis; and on either a **state fiscal year** or a **calendar year**, provided the requirements of TAPCR 1200-03-26-.02(9)(b) are met. If any part of any fee imposed under TAPCR 1200-03-26-.02 is not paid within 15 days of the due date, penalties shall at once accrue as specified in TAPCR 1200-03-26-.02(8).
 - (2) Sources paying annual emissions fees on an allowable emissions basis: pay annual allowable based emission fees for each annual accounting period no later than April 1 of each year pursuant to TAPCR 1200-03-26-.02(9)(d).
 - (3) Sources paying annual emissions fees on an actual emissions basis: prepare an **actual emissions analysis** for each AAP and pay **actual based emission fees** pursuant to TAPCR 1200-03-26-.02(9)(d). The **actual emissions analysis** shall include:
 - (a) the completed **Fee Emissions Summary Table**,
 - (b) each **actual emissions analysis** required, and
 - (c) the actual emission records for each pollutant and each source as required for actual emission fee determination, or a summary of the actual emission records required for fee determination, as specified by the Technical Secretary or the Technical Secretary's representative. The summary must include sufficient information for the Technical Secretary to determine the accuracy of the calculations. These calculations must be based on the annual fee basis approved by the Technical Secretary (a state fiscal year [July 1 through June 30] or a calendar year [January 1 through December 31]). These records shall be used to complete the **actual emissions analyses** required by the above **Fee Emissions Summary Table**.

- (4) Sources paying annual emissions fees on a mixed emissions basis: for all pollutants and all sources for which the permittee has chosen an actual emissions basis, prepare an **actual emissions analysis** for each AAP and pay **actual based emission fees** pursuant to TAPCR 1200-03-26-.02(9)(d). The **actual emissions analysis** shall include:
- (a) the completed **Fee Emissions Summary Table**,
 - (b) each **actual emissions analysis** required, and
 - (c) the actual emission records for each pollutant and each source as required for actual emission fee determination, or a summary of the actual emission records required for fee determination, as specified by the Technical Secretary or the Technical Secretary's representative. The summary must include sufficient information for the Technical Secretary to determine the accuracy of the calculations. These calculations must be based on the fee bases approved by the Technical Secretary (payment on an actual or mixed emissions basis) and payment on a state fiscal year (July 1 through June 30) or a calendar year (January 1 through December 31). These records shall be used to complete the **actual emissions analysis**.
- For all pollutants and all sources for which the permittee has chosen an allowable emissions basis, pay allowable based emission fees pursuant to TAPCR 1200-03-26-.02(9)(d).
- (5) When paying on an actual or mixed emissions basis, submit the **actual emissions analyses** at the time the fees are paid in full.

The annual emission fee due dates are specified in TAPCR 1200-03-26-.02(9)(g) and are dependent on the Responsible Official's choice of fee bases as described above. If any part of any fee imposed under TAPCR 1200-03-26-.02 is not paid within 15 days of the due date, penalties shall at once accrue as specified in TAPCR 1200-03-26-.02(8). Emissions for regulated pollutants shall not be double counted as specified in Condition A8(d) of this permit.

Payment of the fee due and the actual emissions analysis (if required) shall be submitted to The Technical Secretary at the following address:

Payment of Fee to:

The Tennessee Department of Environment and Conservation
Division of Fiscal Services
Consolidated Fee Section – APC
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 10th Floor
Nashville, Tennessee 37243

and

Actual Emissions Analyses to:

The Tennessee Department of Environment and Conservation
Division of Air Pollution Control
Emission Inventory Program
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor
Nashville, Tennessee 37243

or

An electronic copy (PDF) of actual emissions analysis can also be submitted to: apc.inventory@tn.gov

E2. Reporting requirements.

- (a) **Semiannual reports.** Semiannual reports shall cover the six-month periods from **April 1** to **September 30** and **October 1** to **March 31** and shall be submitted within 60 days after the end of each six-month period. Subsequent reports shall be submitted within 60 days after the end of each 6-month period following the first report. The first semiannual report following issuance of this permit shall cover the following permits and reporting periods:

Permit Number	Reporting Period Begins	Reporting Period Ends
Old permit #571742	TBD, 20xx	Day before issuance of permit 580350
New permit #580350	Issuance Date of permit 580350	TBD, 20xx

These semiannual reports shall include:

- (1) Any monitoring and recordkeeping required by conditions **E3-6, E4-1, E5-5, E5-9, E5-10, E5-11, E6-1, E7-1, E7-2, E8-2, E9-4, E9-5, E9-7, E10-3, and E13-1** of this permit. However, a summary report of this data

- is acceptable provided there is sufficient information to enable the Technical Secretary to evaluate compliance.
- (2) The visible emission evaluation readings from condition **E4-4, E5-1, E6-2, E7-3, E8-3, E9-6, E10-7, E10-8, E12-2, E13-3, E15-3, E16-16, and E17-15** of this permit if required. However, a summary report of this data is acceptable provided there is sufficient information to enable the Technical Secretary to evaluate compliance.
 - (3) Identification of all instances of deviations from **ALL PERMIT REQUIREMENTS**.

These reports must be certified by a responsible official consistent with condition B4 of this permit and shall be submitted to The Technical Secretary at the address in Condition E2(b) of this permit.

TAPCR 1200-03-09-.02(11)(e)1.(iii)

(b) Annual compliance certification. The permittee shall submit annually compliance certifications with each term or condition contained in Sections A, B, D and E of this permit, including emission limitations, standards, or work practices. This compliance certification shall include all of the following (provided that the identification of applicable information may cross-reference the permit or previous reports, as applicable):

- (1) The identification of each term or condition of the permit that is the basis of the certification;
- (2) The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period; Such methods and other means shall include, at a minimum, the methods and means required by this permit. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Act, which prohibits knowingly making a false certification or omitting material information;
- (3) The status of compliance with each term or condition of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the method or means designated in E2(b)2 above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion* or exceedance** as defined below occurred; and
- (4) Such other facts as the Technical Secretary may require to determine the compliance status of the source.

* “Excursion” shall mean a departure from an indicator range established for monitoring under this paragraph, consistent with any averaging period specified for averaging the results of the monitoring.

** “Exceedance” shall mean a condition that is detected by monitoring that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) are greater than the applicable emission limitation or standard (or less than the applicable standard in the case of a percent reduction requirement) consistent with any averaging period specified for averaging the results of the monitoring.

Annual compliance certifications shall cover the 12-month period from **April 1 to March 31** and shall be submitted within 60 days after the end of each 12-month period. The first annual compliance certification following issuance of this permit shall cover the following permits and reporting periods:

Permit Number	Reporting Period Begins	Reporting Period Ends
Old permit #571742	April 1, 2023	Day before issuance date of permit 580350
New Permit #580350	Issuance Date of permit 580350	March 31, 2024

These certifications shall be submitted to:

TN APCD and EPA

Nashville Environmental Field Office
Division of Air Pollution Control
711 R.S. Gass Blvd

or

Air.Pollution.Control@tn.gov and
APC.NashEFO@tn.gov

and

Air Enforcement Branch
US EPA Region IV
61 Forsyth Street, SW
Atlanta, Georgia 30303

or

Through the EPA CDX
(<https://cdx.epa.gov/>)

40 CFR Part 70.6(c)(5)(iii) as amended in the Federal Register Vol. 79, No.144, July 28, 2014, pages 43661 through 43667 TAPCR 1200-03-09-.02(11)(e)3.(v)

(c) **MACT Reports** 40 CFR 63 [Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters](#)

The permittee shall submit the MACT reports required by 40 CFR 63 Subpart DDDDD. The compliance dates for 40 CFR 63 Subpart DDDDD is January 31, 2016, except as otherwise provided in §63.6(i).

The permittee shall submit each report in accordance with §63.7550(h) and Table 9 of Subpart DDDDD. Since affected units covered by this permit are subject only to a requirement to conduct an annual (or biennial or 5-year) tune-ups according to §63.7540(a)(10), the permittee may submit an annual (or biennial or 5-year) compliance report instead of a semiannual compliance report. 40 CFR §63.7550(b)

Pursuant to §63.7550(h)(3) the permittee shall submit the Notification of Compliance Status Report required by §63.9(h)(2)(ii) and all reports required by Table 9 of Subpart DDDDD electronically using CEDRI that is accessed through the EPA's Central Data Exchange (CDX) (www.epa.gov/cdx), if the reporting form specific to Subpart DDDDD is available in CEDRI at the time that the report is due. If the reporting form specific to Subpart DDDDD is not available in CEDRI at the time that the report is due, the permittee must submit the report to the Technical Secretary at Air.Pollution.Control@tn.gov.

If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. 40 CFR §63.7540(b)

Each annual, biennial, and 5-year compliance report must cover the applicable 1-, 2-, or 5-year periods from January 1 to December 31. The annual, biennial, and 5-year compliance reports must be postmarked or submitted no later than January 31 of the following year, unless an alternative reporting schedule is approved by the Technical Secretary. 40 CFR §63.7550(b)(3), (4), and (5)

The above-referenced MACT reports are not required to be submitted on a semiannual basis. However, compliance must be certified and submitted to the CDX exchange for the time periods as specified above. TAPCR 1200-03-09-.03(8) and 40 CFR §63.7550

The permittee shall keep a copy of each notification and report submitted to comply with this subpart, including all supporting documentation. 40 CFR §63.7555(a)

The permittee shall keep records in a form suitable and readily available for expeditious review, in accordance with §63.7560 and §63.10(b)(1).

For a source required to meet an applicable tune-up work practice standard, the permittee must conduct an annual, biennial, or 5-year performance tune-up according to §63.7540(a)(10), (11), or (12), respectively. Each annual tune-up specified in §63.7540(a)(10) must be conducted no more than 13 months after the previous tune-up. Each biennial tune-up specified in §63.7540(a)(11) must be conducted no more than 25 months after the previous tune-up. Each 5-year tune-up specified in §63.7540(a)(12) must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed affected source, as defined in §63.7490, the first annual, biennial, or 5-year tune-up must be no later than 13 months, 25 months, or 61 months, respectively, after April 1, 2013, or the initial startup of the new or reconstructed affected source, whichever is later.

This facility is subject to the provisions of Table 10 to 40 CFR 63 Subpart DDDDD – Applicability of General Provisions to Subpart DDDDD.

(d) **Retention of Records** All records required by any condition in Section E of this permit must be retained for a period of not less than five years. Additionally, these records shall be kept available for inspection by the Technical Secretary or a Division representative.

TAPCR 1200-03-09-.02(11)(e)1.(iii)(II)II

E3. General Facility Conditions

- E3-1.** Fugitive emissions from this facility shall be controlled as specified in Rule 1200-03-08-.01. Specifically, no person shall cause, suffer, allow, or permit fugitive dust to be emitted in such manner to exceed five (5) minutes per hour or twenty (20) minutes per day as to produce a visible emission beyond the property line of the property on which the emission originates, excluding malfunction of equipment as provided in Chapter 1200-03-20. Fugitive emissions from this source shall be determined by Tennessee Visible Emissions Evaluation Method 4 as adopted by the Tennessee Air Pollution Control Board on April 16, 1986.

Compliance Method: Compliance with this standard shall be determined by conducting fugitive emission evaluations as directed by the Technical Secretary.

- E3-2.** The processes at this facility shall not operate without the associated pollution control equipment. Upon the malfunction/failure of any emission control device(s), the operation of the process(es) served by the device(s) shall be regulated by Chapter 1200-03-20 of the Tennessee Air Pollution Control Regulations.
- E3-3.** The Division has determined that this facility is not subject to the “GACT” Rule 40 CFR 63 [SUBPART VVVVVV--National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources](#) or the MACT Rule 40 CFR 63 [Subpart FFFF—National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing](#). In order to verify that determination, an inquiry dated April 4, 2011 (see **Attachment 4**) was sent to the US EPA. In the letter dated May 26, 2011 (see **Attachment 4**) EPA has also determined that this facility is not subject to Subpart VVVVV and MACT Rule 40 CFR 63 Subpart FFFF.
- E3-4.** Sulfur dioxide emissions from all sources at this facility except the manganese reduction furnaces (**43-0021-02**), the four boilers (**42-0021-11**), the five NSPS emergency generator engines (**43-0021-24**), and the six NESHAP emergency generator engines (**43-0021-25**) shall not exceed **100** parts per million by volume.

TAPCR 1200-03-19-.14(1)(c)6.(ii)

Compliance Method: The potential to emit for sulfur dioxide from each of these sources are less than five tons per year each. In accordance with TAPCR 1200-03-09-.04(5)(c)3. and by annual certification of compliance, the permittee shall be considered to meet the monitoring and related recordkeeping and reporting requirements of TAPCR 1200-03-09-.02(11)(e)3.(i). The permittee shall submit annually a compliance certification for sulfur dioxide from these sources. Certifications shall be submitted in accordance with **Condition E2** of this permit.

- E3-5.** For sources required to maintain daily logs, all data, including all required calculations, must be entered in the log no later than 7 days from the end of the day for which the data is required. For sources required to maintain monthly logs, all data, including all required calculations, must be entered in the log no later than 30 days from the end of the month for which the data is required.

TAPCR 1200-03-10-.02(2)(a)

- E3-6.** Plant-wide natural gas usage shall not exceed **880,985,050** standard cubic feet per consecutive 12-month period. This emission limit is established pursuant to TAPCR 1200-03-07-.01(5), the construction permit application dated February 27, 2015, additional information dated April 29, 2015, and Construction Permit 969961P dated July 27, 2015. This limit is set for the purpose of PSD avoidance.

Compliance Method: Compliance shall be determined from data in **Table 1** below:

Table 1 – Monthly / Consecutive 12-Month Natural Gas Usage Log

MONTH/YEAR	Natural Gas Usage (cubic feet per month)	Natural Gas Usage (cubic feet per consecutive 12-month) *

(*) The cubic feet per consecutive 12-month value is the sum of the natural gas usage in cubic feet in the 11 months preceding the month just completed + the cubic feet usage in the month just completed. If data is not available for the 11 months preceding the initial use of this log, this value will be equal to the value for that month. For the second month it will be the sum of the values for first month and the second month.

E3-7. Identification of Responsible Official, Technical Contact, and Billing Contact

- (a) The application that was utilized in the preparation of this permit is dated May 2, 2022, and signed by Darrell Fisher, Plant Manager of the permitted facility. If this person terminates employment or is assigned different duties and is no longer a Responsible Official for this facility as defined in part 1200-03-09-.02(11)(b)21 of the Tennessee Air Pollution Control Regulations, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification must be in writing and must be submitted within thirty (30) days of the change. The notification shall include the name and title of the new Responsible Official and certification of truth and accuracy. All representations, agreement to terms and conditions, and covenants made by the former Responsible Official that were used in the establishment of the permit terms and conditions will continue to be binding on the facility until such time that a revision to this permit is obtained that would change said representations, agreements, and/or covenants.
- (b) The application that was utilized in the preparation of this permit is dated May 2, 2022, and identifies Joel Jordan as the Principal Technical Contact for the permitted facility. If this person terminates employment or is assigned different duties and is no longer the Principal Technical Contact for this facility, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification must be in writing and must be submitted within thirty (30) days of the change. The notification shall include the name and title of the new Principal Technical Contact and certification of truth and accuracy.
- (c) The application that was utilized in the preparation of this permit is dated May 2, 2022, and identifies Joel Jordan as the Billing Contact for the permitted facility. If this person terminates employment or is assigned different duties and is no longer the Billing Contact for this facility, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification must be in writing and must be submitted within thirty (30) days of the change. The notification shall include the name and title of the new Billing Contact and certification of truth and accuracy.

E3-8. This source shall operate in accordance with the terms of this permit and the information submitted in the approved permit application.

TAPCR 1200-03-09-.03(8)

E3-9. This source shall comply with all applicable state and federal air pollution regulations. This includes but is not limited to federal regulations published under 40 CFR 63 for sources of hazardous air pollutants and 40 CFR 60, New Source Performance Standards.

TAPCR 1200-03-09-.03(8)

E3-10. Insignificant activities

Insignificant activities as stated by the permittee in the Title V Application per Rule 1200-03-09-.04(5) are listed below. Additional insignificant activities may be added and operated at any time with the provision that a written notification shall be submitted to the Technical Secretary including an updated APC V.2 application form along with a truth, accuracy, and completeness statement signed by a responsible official. The permit may be updated to include additional insignificant sources by means of an administrative amendment, if necessary.

Activity	Categorically Exempt Activity (TN Rule)	Reason for Being an Insignificant Activity
Lab Equipment; oven and exhaust hoods	1200-03-09-.04(5)(f)(20)	N/A
Portable welding equipment	1200-03-09-.04(5)(f)(24)	N/A
Routine building maintenance, road and lawn maintenance, housekeeping activities	1200-03-09-.04(5)(f)(54)	N/A
Maintenance activities; metal machining, vehicle repair shops, carpenter shops, and vents	1200-03-09-.04(5)(f)(55)	N/A
Miscellaneous activities and equipment, aerosol spray cans, bathroom and locker room vents, photo copying and blueprint machines, and space heaters	1200-03-09-.04(5)(f)(56)	N/A
Portable generators	1200-03-09-.04(5)(f)(71)	N/A
Air purification systems	1200-03-09-.04(5)(f)(83)	N/A
Sanitary sewer systems	1200-03-09-.04(5)(f)(102)	N/A
Use of office equipment and supplies	1200-03-09-.04(5)(f)(105)	N/A
Sulfuric acid tanks	1200-03-09-.04(5)(f)(110)	N/A
Diesel and fuel oil storage tanks < 40,000 gallons	N/A	1200-03-09-.04(5)(g)(4)
All storage tanks < 10,000 gallons	NA	1200-03-09-.04(5)(g)(10)

SOURCE SPECIFIC CONDITIONS

43-0021-01 Ground Ore Grinding Dust Collection System with a Maximum Process Weight Rate of 35,000 Pounds per Hour, utilizing a Natural Gas Fired Pre-Heater for Drying, 7.1 MMBtu per Hour. Cyclone with Cartridge Dust Collector Control System (10,148 DSCFM).

Conditions E4-1 through E4-4 apply to this source.

E4-1. Particulate matter emitted from this source shall not exceed 0.02 grains per dry standard cubic foot and **1.74** pounds per hour.

TAPCR 1200-03-07-.01(5) and the agreement letter dated February 1, 2008, from the permittee.

Compliance Method: Compliance with this requirement shall be assured by maintaining a minimum pressure drop of **1.0** inch of water across the cartridge dust collector. The pressure drop for the cartridge dust collector shall be recorded once daily when the source is in operation. The days when the source does not operate shall be noted.

For lower pressure drop reading(s) resulting from replacement of cartridge filters, the permittee shall record the deviation(s) as such in their daily records. Due allowance will be made for lower pressure drop reading(s) which follow replacement of filters provided the permittee establishes to the satisfaction of the Technical Secretary that these lower readings resulted from the replacement of filters.

E4-2. The maximum heat input for the dryer shall not exceed **7.1** MMBtu/hr. Any increase in this capacity will require a construction permit.

TAPCR 1200-03-09-.03(8)

Compliance Method: Compliance with this condition shall be assured by annual certification, as required in **Condition E2(b)**.

E4-3. Only natural gas shall be used as fuel for this source.

TAPCR 1200-03-09-.03(8)

Compliance Method: Compliance with this condition shall be assured by annual certification, as required in **Condition E2(b)**.

E4-4. Visible emissions from sources at this facility shall not exhibit greater than twenty percent (20%) opacity, except for one (1) six-minute period in any one (1) hour period, and for no more than four (4) six-minute periods in any twenty-four (24) hour period. Visible emissions from this source shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (6-minute average).

TAPCR 1200-03-05-.03(6) and TAPCR 1200-03-05-.01(1)

Compliance Method: The permittee shall assure compliance with the opacity standard by utilizing the opacity matrix dated June 18, 1996, as amended on September 11, 2013, that is enclosed as **Attachment 1**. Reports and certifications shall be submitted in accordance with **Condition E2** of this permit.

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

43-0021-02 Ground Ore Furnace Dust Collector - Ground manganese dioxide ore and coal are fed to six (6) electric furnace pairs and ground manganese dioxide ore and natural gas (as a reactant and as a fuel) are fed to the two (2) calciners. The furnaces and calciners reduce the ore to manganese oxide.

Coal Mill Dust Collector - This process consists of storage, drying and pulverizing of coal.

Reduction Furnaces are exhausted to Cyclone with Cartridge Filter Control (FD-1). (Approx. 26,380-26,960 dscfm exhaust gas flow) NESHAP Subpart DDDDD [2 Natural gas-fired furnaces only; coal units are electrically heated and are not subject to Subpart DDDDD]

Condition E5-1 applies to both the Coal Mill Dust Collector and the Ground Ore Dust Collector

E5-1. Visible emissions from processes specified on this permit at this facility shall not exhibit greater than twenty percent (20%) opacity, except for one (1) six-minute period in any one (1) hour period, and for no more than four (4) six-minute periods in any twenty-four (24) hour period. Visible emissions from this source shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (6-minute average).

TAPCR 1200-03-05-.03(6) and TAPCR 1200-03-05-.01(1)

Compliance Method: The permittee shall assure compliance with the opacity standard by utilizing the opacity matrix dated June 18, 1996, as amended on September 11, 2013, that is enclosed as **Attachment 1**. Reports and certifications shall be submitted in accordance with **Condition E2** of this permit.

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Conditions E5-2 through E5-5 apply to the Coal Mill Dust Collector.

E5-2. The total stated design input capacity for the coal mill serving this source is **5,000** pounds of coal per hour.

TAPCR 1200-03-09-.03(8)

Compliance Method: All coal crushed is utilized in the furnaces so that compliance with **Condition E5-7** shall be deemed compliance with **Condition E5-2**.

- E5-3.** The total design heat input capacity for the coal dryer shall not exceed **0.48 MMBtu/hr** (natural gas only). This unit is exhausted through a baghouse collector and stack, as specified in **Condition E5-5** of this permit. Any increase in this capacity will require a construction permit.

TAPCR 1200-03-09-.03(8)

Compliance Method: Compliance with this condition shall be assured by annual certification, as required in **Condition E2(b)**.

- E5-4.** Only natural gas shall be used as fuel for the coal dryer.

TAPCR 1200-03-09-.03(8)

Compliance Method: Compliance with this condition shall be assured by annual certification, as required in **Condition E2(b)**.

- E5-5.** Particulate matter (PM) emitted from **the cartridge collector controlling the coal dryer and coal mill** (grinder) shall not exceed 0.02 grains per dry standard cubic foot of exhaust gas and **0.43** pounds per hour. The permittee has requested this limit in order to reduce allowable emissions. Materials captured by the collector are recycled to the process. The flow is approximately 2,522 dscfm.

TAPCR 1200-03-07-.01(5) and permittee's agreement letter dated January 5, 2015

Compliance Method: Compliance with this requirement shall be assured by maintaining a minimum pressure drop of **0.5** inches of water across the cartridge collector. The pressure drop for the cartridge collector shall be recorded once daily when the source is in operation. The days when the source does not operate shall be noted.

For lower pressure drop reading(s) resulting from replacement of filter media, the permittee shall record the deviation(s) as such in their daily records. Due allowance will be made for lower pressure drop reading(s) which follow replacement of filter media provided the permittee establishes to the satisfaction of the Technical Secretary that these lower readings resulted from the replacement of filter media.

Conditions E5-6 through E5-15 apply to the Ground Ore Furnace Dust Collector.
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- E5-6.** The total stated design input capacity for this source (which includes a total of six electric furnace pairs and two calciners) is **19,984** pounds of manganese ore per hour.

TAPCR 1200-03-09-.03(8)

Compliance Method: Assurance of compliance with the above process weight limit shall be determined from the compliance method in **Condition E5-9** of this permit.

- E5-7.** The maximum amount of coal processed in the electric reducing furnaces shall not exceed **1,197** pounds per hour (total).

TAPCR 1200-03-09-.03(8)

Compliance Method: Assurance of compliance shall be determined from the compliance method in **Condition E5-9** of this permit.

- E5-8.** The stated design heat input capacity for the gas-fired calciners is **14 MMBtu/hour** for each calciner for heating/fuel purposes (**28 MMBtu/hr** combined total for two gas-fired units). This natural gas fuel stream for each calciner is separate from the natural gas stream used as a reactant for each furnace. Any increase in this capacity will require a construction permit.

TAPCR 1200-03-09-.03(8)

Compliance Method: Compliance with this condition shall be assured by annual certification, as required in **Condition E2(b)**.

- E5-9.** Fugitive emissions of particulate matter from this source shall not exceed **2.18** pounds per hour.

TAPCR 1200-03-09-.03(8)

Compliance Method: Compliance with this requirement shall be assured by keeping monthly records of the amounts of manganese ore and coal processed through the electric reduction furnaces and the number of hours that the furnaces operate each month.

Average process weights for manganese ore and coal processed shall be calculated on a monthly basis from this data, and this shall be used to assure compliance with design input capacity limits set in **Conditions E5-6** and **E5-7**, respectively. These design input capacity limits and calculations utilizing emission factors found in the Compilation of Air Pollutant Emission Factors AP-42 published by the US EPA were the basis of establishing this fugitive emissions limit, so compliance with the aforementioned design input capacity limits and the calculations dated June 22, 2004, submitted by the permittee, shall assure compliance with this fugitive emission limit.

- E5-10.** Particulate matter (PM) emitted from the Reducing Furnace/Calcliner Control Device at this source shall not exceed **4.52** pounds per hour. The permittee has requested this limit in order to reduce allowable emissions. Materials captured by the collector are recycled to the process. The approximate exhaust gas flow is 26,380 – 26,960 dscfm.

TAPCR 1200-03-07-.01(5) and permittee's agreement letter dated January 5, 2015

Compliance Method for Cartridge Filter Collector: Compliance with this requirement shall be assured by maintaining a minimum pressure drop of **2.5** inches of water across the cartridge collector (designated as Furnace Dust Collector FD-1). The pressure drop for this unit shall be recorded once daily when the source is in operation. The days when the source does not operate shall be noted. For lower pressure drop reading(s) resulting from replacement of filter media, the permittee shall record the deviation(s) as such in their daily records. Due allowance will be made for lower pressure drop reading(s) which follow replacement of filter media provided the permittee establishes to the satisfaction of the Technical Secretary that these lower readings resulted from the replacement of filter media. A record of the daily pressure drop readings including above-mentioned information must be reported in accordance with **Condition E2** of this permit.

- E5-11.** The sulfur content of the coal shall not exceed **1.52%** by weight.

TAPCR 1200-03-09-.03(8)

Compliance Method: The company shall obtain certification from the coal supplier of the fuel sulfur content (by weight) for each shipment of coal or alternately, the vendor may supply a statement to the effect that all coal will contain no more than **1.52%** sulfur by weight. These records must be kept available for inspection by the Technical Secretary or their representative for a period of not less than five years.

- E5-12.** Sulfur dioxide emissions from this source shall not exceed **36.4** pounds per hour. This emission limitation is established pursuant to Rule 1200-03-14-.01(3) of the Tennessee Air Pollution Control Regulations and information contained in the agreement letter dated October 31, 2003, from the permittee. (Note – this mutually agreed limit (agreement letter dated December 11, 2003, from permittee) is more restrictive than the regulatory limit of 350 part per million set forth in 1200-03-19-.14(1)(c)6(i).

Compliance Method: Compliance with **Conditions E5-7** and **E5-11** shall be deemed to assure compliance with this limit.

- E5-13.** Nitrogen oxides (NO_x) emitted from each new natural gas-fired furnace shall not exceed **1.02** pounds per hour (73.8 pounds of NO_x / MM ft³ of natural gas combustion and **2.04** pounds of NO_x emissions per hour, for both new furnaces, combined). This restriction is for the natural gas combustion stream only and does not include the emission exhaust from the Ore Reduction Operations.

TAPCR 1200-03-07-.07(2) and permittee's agreement letter dated January 20, 2015

Compliance Method: Compliance is based on the vendor supplied emission factor of **60-ppm of NO_x** in the combustion exhaust gas stream. Information which specifies a **60-ppm** exhaust NO_x concentration in the combustion exhaust stream, and which also indicates compliance with a **1.02** pound per of NO_x per hour emission limit for the combustion exhaust stream shall be maintained onsite and shall be kept available to the Technical Secretary or their representative.

- E5-14.** This source is subject to and shall comply with 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for particulate matter. **Attachment 3** summarizes the CAM requirements. After the new baghouse is installed for the calciner/reducing

furnaces, the requirements of CAM monitoring will still apply, but there will not be a referenced minimum pressure drop value until the 30-day pressure drop study is complete and the new minimum value is included in the permit by minor modification.

- E5-15.** The two new gas-fired reduction furnaces are subject to and shall comply with all applicable provisions of 40 CFR 63 Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. These requirements apply only to the natural gas stream that provides heat for these two new reducing furnaces, and not to the natural gas streams that supply gas as a reducing agent. See **Condition E2(c)** for reporting requirements.

The permittee must meet the applicable work practice standards in Table 3 to 40 CFR 63 Subpart DDDDD for each affected unit designed to burn gas 1 type fuel in accordance with 40 CFR §63.7500, as specified below:

Type of Unit	Associated Requirement
A boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater for units designed to burn Gas 1.	Conduct a tune-up of the boiler or process heater annually in accordance with §63.7540

TAPCR 1200-03-09-.03(8), TAPCR 0400-30-38-.01(1)(b)106, 40 CFR §63.7550, and 40 CFR §63.7540(a)

43-0021-04 **CIR Dust Collector - CIR Product (Manganese Dioxide) Grinding, Handling, & Packaging
Grinding, Screening, Washing, Electric Drying, & Bagging of Manganese Ore - Bag filter Control**

Conditions E6-1 and E6-2 apply to this source.

- E6-1.** Particulate matter emitted from this source shall not exceed 0.02 grains per dry standard cubic foot (**0.259** pounds per hour).

TAPCR 1200-03-07-.04(1)

Compliance Method: Compliance with this requirement shall be assured by maintaining a minimum pressure drop of **2.0** inches of water across the baghouse. The pressure drop for the baghouse shall be recorded once daily when source is in operation. The days when the source does not operate shall be noted.

For lower pressure drop reading(s) resulting from replacement of bags, the permittee shall record the deviation(s) as such in their daily records. Due allowance will be made for lower pressure drop reading(s) which follow replacement of bags provided the permittee establishes to the satisfaction of the Technical Secretary that these lower readings resulted from the replacement of bags.

- E6-2.** Visible emissions from this source shall not exhibit greater than 20 percent (20%) opacity, except for one (1) six-minute period in any one (1) hour period, and for no more than four (4) six-minute periods in any twenty-four (24) hour period. Visible emissions from this source shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (6-minute average).

TAPCR 1200-03-05-.03(6) and TAPCR 1200-03-05-.01(1)

Compliance Method: The permittee shall assure compliance with the opacity standard by utilizing the opacity matrix dated June 18, 1996, as amended on September 11, 2013, that is enclosed as **Attachment 1**. Reports and certifications shall be submitted in accordance with **Condition E2** of this permit.

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

43-0021-08 **Lime System - Unloading of Lime from Trucks to Storage Bin and feeding Lime from Bin to Wastewater Treatment – Wet Scrubber Control**

Conditions E7-1 through E7-3 apply to this source.

- E7-1.** Particulate matter emitted from this source shall not exceed 0.25 grains per dry standard cubic foot (**1.93** pounds per hour).

TAPCR 1200-03-07-.04(2)

Compliance Method: The permittee shall assure that the scrubber is fully operational and is operating anytime the silo is being loaded. This fact shall be noted in a written record.

- E7-2.** Operating time for truck unloading shall not exceed one hundred (**100**) hours per year.

TAPCR 1200-03-07-.01(5)

Compliance Method: A log of the operating hours of truck unloading must be maintained at the facility.

- E7-3.** Visible emissions from this source shall not exhibit greater than 20 percent (20%) opacity, except for one (1) six-minute period in any one (1) hour period, and for no more than four (4) six-minute periods in any twenty-four (24) hour period. Visible emissions from this source shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (6-minute average).

TAPCR 1200-03-05-.03(6) and TAPCR 1200-03-05-.01(1)

Compliance Method: The permittee shall assure compliance with the opacity standard by utilizing the opacity matrix dated June 18, 1996, as amended on September 11, 2013, that is enclosed as **Attachment 1**. Reports and certifications shall be submitted in accordance with **Condition E2** of this permit.

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

43-0021-09	<u>Final Product Blending and Storage Operation with Baghouse Control</u>
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Conditions E8-1 through E8-3 apply to this source.

- E8-1.** The stated design input capacity for the product storage blend conveyor (**M-258**) is **15,390** pounds of Manganese Dioxide (MnO₂) per hour. Any increase in this capacity will require a construction permit.

TAPCR 1200-03-09-.03(8)

- E8-2.** Particulate matter (PM) emitted from this source shall not exceed 0.02 grains per dry standard cubic foot of exhaust gas (**0.15** pound per hour). This emission limitation is established pursuant to Rule 1200-03-07-.01(5) of the Tennessee Air Pollution Control Regulations and the information contained in the agreement letter dated March 30, 2000, from the permittee. The permittee has requested this limit in order to reduce allowable emissions.

TAPCR 1200-03-07-.01(5)

Compliance Method: The baghouse will be maintained, kept in good operating condition, and inspected semiannually to ensure compliance with the applicable particulate matter limits. Documentation of the semiannual inspections and any maintenance performed will be kept on site for a period of not less than five (5) years.

- E8-3.** Visible emissions from this source shall not exhibit greater than 20 percent (20%) opacity, except for one (1) six-minute period in any one (1) hour period, and for no more than four (4) six-minute periods in any twenty-four (24) hour period. Visible emissions from this source shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (6-minute average).

TAPCR 1200-03-05-.03(6) and TAPCR 1200-03-05-.01(1)

Compliance Method: The permittee shall assure compliance with the opacity standard by utilizing the opacity matrix dated June 18, 1996, as amended on September 11, 2013, that is enclosed as **Attachment 1**. Reports and certifications shall be submitted in accordance with **Condition E2** of this permit.

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

43-0021-10	<u>Product Crushing, Milling, and Drying / Packaging of Manganese Dioxide - Cyclone and Three (3) Baghouse (10A, 10B, and 10C) as Control. Jaw Crusher Dust Collector (10A), Product Prep Dryer Dust Collector (10B), and Product Prep Grinding Dust Collector (10C)</u>
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Conditions E9-1 through E9-7 apply to this source.

E9-1. The stated design input capacity for this source is **20,986** pounds of MnO₂ chips per hour. Any increase in this capacity will require a construction permit.

TAPCR 1200-03-09-.03(8)

Compliance Method: Compliance shall be determined from compliance method in **Condition E9-5** of this permit.

E9-2. The total design heat input capacity for the dryer shall not exceed **2.5** MMBTU/hr. Any increase in this capacity will require a construction permit.

TAPCR 1200-03-09-.03(8)

Compliance Method: Compliance with this condition shall be assured by annual certification, as required in **Condition E2(b)**.

E9-3. Only natural gas shall be used as fuel for the dryer.

TAPCR 1200-03-09-.03(8)

Compliance Method: Compliance with this condition shall be assured by annual certification, as required in **Condition E2(b)**.

E9-4. Particulate matter (PM) emitted from this source shall not exceed **6.68** pounds per hour. This emission limitation is established pursuant to Rule 1200-03-07-.01(5) of the Tennessee Air Pollution Control Regulations and the information contained in the agreement letter dated August 20, 2001, from the permittee. The permittee has requested this limit in order to reduce allowable emissions.

TAPCR 1200-03-07-.01(5)

Compliance Method for Baghouse 10A (Jaw Crusher Dust Collector):

Compliance Method: Compliance with this requirement shall be assured by maintaining a minimum pressure drop of **2.0** inches of water across the baghouse. The pressure drop for the baghouse shall be recorded once daily when source is in operation. The days when the source does not operate shall be noted.

For lower pressure drop reading(s) resulting from replacement of bags, the permittee shall record the deviation(s) as such in their daily records. Due allowance will be made for lower pressure drop reading(s) which follow replacement of bags provided the permittee establishes to the satisfaction of the Technical Secretary that these lower readings resulted from the replacement of bags.

Compliance Method for Baghouse 10B (Product Prep Dryer Dust Collector):

Compliance Method: Compliance with this requirement shall be assured by maintaining a minimum pressure drop of **1.0** inch of water across the baghouse. The pressure drop for the baghouse shall be recorded once daily when source is in operation. The days when the source does not operate shall be noted.

For lower pressure drop reading(s) resulting from replacement of bags, the permittee shall record the deviation(s) as such in their daily records. Due allowance will be made for lower pressure drop reading(s) which follow replacement of bags provided the permittee establishes to the satisfaction of the Technical Secretary that these lower readings resulted from the replacement of bags.

Compliance Method for Baghouse 10C (Product Prep Grinding Dust Collector):

Compliance Method: Compliance with this requirement shall be assured by maintaining a minimum pressure drop of **0.5** inches of water across the baghouse. The pressure drop for the baghouse shall be recorded once daily when the source is in operation. The days when the source does not operate shall be noted.

For lower pressure drop reading(s) resulting from replacement of bags, the permittee shall record the deviation(s) as such in their daily records. Due allowance will be made for lower pressure drop reading(s) which follow replacement of bags provided the permittee establishes to the satisfaction of the Technical Secretary that these lower readings resulted from the replacement of bags.

- E9-5.** Fugitive emissions of particulate matter from this source shall not exceed **2.6** pounds per hour.

TAPCR 1200-03-08

Compliance Method: Compliance with this requirement shall be assured by keeping monthly records of the amount of MnO₂ chips processed through this source and the number of hours that this source operates each month. An average process weight for the amount of MnO₂ chips processed shall be calculated on a monthly basis from this data, and this shall be used to assure compliance with the design input capacity limit set forth in **Condition E9-1**. The use of this design input capacity limit and calculations utilizing emission factors in the Compilation of Air Pollutant Emission Factors AP-42 published by the US EPA were the basis of establishing this fugitive emissions limit, so compliance with the aforementioned design input capacity limit and calculations dated **June 22, 2004**, submitted by the permittee shall assure compliance with this fugitive emission limit.

- E9-6.** Visible emissions from this source shall not exhibit greater than twenty percent (20%) opacity, except for one (1) six-minute period in any one (1) hour period, and for no more than four (4) six-minute periods in any twenty-four (24) hour period. Visible emissions from this source shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (6-minute average).

TAPCR 1200-03-05-.03(6) and TAPCR 1200-03-05-.01(1)

Compliance Method: The permittee shall assure compliance with the opacity standard by utilizing the opacity matrix dated June 18, 1996, as amended on September 11, 2013, that is enclosed as **Attachment 1**. Reports and certifications shall be submitted in accordance with **Condition E2** of this permit.

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

- E9-7.** This source is subject to and shall comply with 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for particulate matter. **Attachment 3** of this permit summarizes the CAM requirements.

TAPCR 1200-03-09-.03(8)

43-0021-11	Four (4) Boilers - Three (3) Fire Tube and One (1) Water Tube Boilers - Natural Gas - 178.69 Million Btu/hour Heat Input (Total) Boiler #1 – 31.38 MM Btu per hour, Boiler #2 – 31.38 MM Btu per hour, Boiler #3 – 31.38 MM Btu per hour and Boiler #4 – 84.552 MM Btu per hour. NESHAP Subpart DDDDD and NSPS Subpart Dc [Boilers #3 and #4 Only]
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Conditions E10-1 through E10-9 apply to this source.

- E10-1.** The maximum heat input capacity for this fuel-burning installation shall not exceed **178.69** MMBtu per hour. The maximum heat input for boilers #1, #2 & #3 shall not exceed **31.38** MMBtu per hour each, and the maximum heat input capacity for boiler #4 shall not exceed **84.552** MMBtu per hour. Any change to any of these units that will result in an increase in the heat input capacity will require a construction permit.

TAPCR 1200-03-09-.03(8)

Compliance Method: Compliance with this condition shall be assured by annual certification, as required in **Condition E2(b)**.

- E10-2.** Only natural gas shall be used as fuel for this source.

TAPCR 1200-03-09-.03(8)

Compliance Method: Compliance with this condition shall be assured by annual certification, as required in **Condition E2(b)**.

- E10-3.** The permittee shall keep monthly records of total natural gas usage in order to assure compliance with the requirements of 40 CFR 60.48c(g) from Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. The permittee shall keep a log of the monthly natural gas usage and the operating hours for each boiler while it is combusting natural gas. Based on the maximum fuel usage capacity for each boiler and records of the operating hours for each unit, the monthly natural gas usage shall be prorated between these boilers.

Note - As of the time of issuance of this permit, there is one meter which records the natural gas usage for the #4 boiler (rated at **84.552** MMBtu per hour) and one meter which records the combined natural gas usage for the #1, 2, and 3 boilers (each rated at **31.38** MMBtu per hour).

40 CFR 60.48c(g)

- E10-4.** Particulate matter (PM) emitted from all boilers (**178.69 MMBtu/hr total heat input**) shall not exceed **0.0076** pounds per million British thermal unit (lb/MMBtu) (**1.4** pounds per hour (lbs/hr)). This emission limitation is established pursuant to 1200-03-06-.01(7) of the Tennessee Air Pollution Control Regulations and the information contained in the agreement letter dated July 5, 2017, from the permittee.

TAPCR 1200-03-06-.01(7)

Compliance Method: Assurance of compliance for the particulate emission limit is based on the EPA AP-42 emission factor for combustion of natural gas. (See **Attachment 2**)

- E10-5.** Sulfur dioxide (SO₂) emitted from all boilers (**178.69 MMBtu/hr**) shall not exceed **0.0006** lb/MMBtu (**0.1** lb/hr). This emission limitation is established pursuant to 1200-03-19-.14(1)(b)5. of the Tennessee Air Pollution Control Regulations and the information contained in the agreement letter dated July 5, 2017, from the permittee.

TAPCR 1200-03-19-.14(1)(b)5.

Compliance Method: Assurance of compliance for the sulfur dioxide emission limit is based on the EPA AP-42 emission factor for combustion of natural gas. (See **Attachment 2**)

- E10-6.** Total nitrogen oxides (NO_x) emitted from all boilers (**178.69 MMBtu/hr**) shall not exceed **0.1** lb/MMBtu (**17.9** lbs/hr). This emission limitation is established pursuant to 1200-03-06-.01(7) of the Tennessee Air Pollution Control Regulations and the information contained in the agreement letter dated July 5, 2017, from the permittee.

TAPCR 1200-03-06-.01(7)

Compliance Method: Assurance of compliance for the nitrogen oxides emission limits are based upon the following EPA AP-42 emission factor for combustion of natural gas. (See **Attachment 2**)

- E10-7.** Visible emissions from boilers **#1 & #2** at this facility shall not exhibit greater than 20 percent (20%) opacity, except for one (1) six-minute period in any one (1) hour period, and for no more than four (4) six-minute periods in any twenty-four (24) hour

period. Visible emissions from this source shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (6-minute average).

TAPCR 1200-03-05-.03(6) and TAPCR 1200-03-05-.01(1)

Compliance Method: The permittee shall assure compliance with the opacity standard by utilizing the opacity matrix dated June 18, 1996, as amended on September 11, 2013, that is enclosed as **Attachment 1**. Reports and certifications shall be submitted in accordance with **Condition E2** of this permit.

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

- E10-8.** Visible emissions from Boilers #3 and #4 (NSPS) shall not exceed 20% except for one 6-minute period per hour of not more than 27%. The opacity standard shall apply at all times, except during periods of startup, shutdown or malfunction.

NSPS § 60.43c(c)

Compliance Method: The permittee shall assure compliance with the opacity standard by utilizing the opacity matrix dated June 18, 1996, as amended on September 11, 2013, that is enclosed as **Attachment 1**. Reports and certifications shall be submitted in accordance with **Condition E2** of this permit.

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

- E10-9.** These existing boilers are subject to and shall comply with all applicable provisions of 40 CFR 63 Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters.

The permittee must meet the applicable work practice standards in Table 3 to 40 CFR 63 Subpart DDDDD for each affected unit designed to burn Gas 1 type fuel in accordance with 40 CFR §63.7500, as applicable below:

If the unit is...	The permittee must...
A boiler or process heater with a continuous oxygen trim system that maintains an optimum air to fuel ratio or a heat input capacity of less than or equal to 5 million Btu per hour for units designed to burn Gas 1.	Conduct a tune-up of the boiler or process heater every 5 years in accordance with §63.7540.
A boiler or process heater with heat input capacity of less than 10 million Btu per hour, but greater than 5 million Btu per hour for units designed to burn Gas 1.	Conduct a tune-up of the boiler or process heater biennially in accordance with §63.7540.
A boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater for units designed to burn Gas 1.	Conduct a tune-up of the boiler or process heater annually in accordance with §63.7540.

40 CFR 63 Subpart DDDDD reporting requirements are found in **Condition E2(c)**.

TAPCR 1200-03-09-.03(8), TAPCR 0400-30-38-.01(1)(b)106, and 40 CFR §63.7550

43-0021-17	<u>Digestion & Purification Process - Reaction of Reduced Manganese Oxide (MnO) with Sulfuric Acid (H₂SO₄) for Production of Manganese Sulfate (MnSO₄) Solution. Addition of Sodium Hydrosulfide (NaSH) to Manganese Sulfate for Cobalt Removal</u>
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Conditions E12-1 and E12-2 apply to this source.

- E12-1.** Hydrogen sulfide emitted from this source shall not exceed **1.0** pounds per hour on a daily average basis.

TAPCR 1200-03-07-.07(2)

Compliance Method: Based on the **December 8, 2010**, testing of this source to assure compliance with the hydrogen sulfide limit set forth in this Condition, the actual emissions were found to be very low and a determination was made that compliance is inherent in the operation of this process.

- E12-2.** Visible emissions from this source shall not exhibit greater than 20 percent (20%) opacity, except for one (1) six-minute period in any one (1) hour period, and for no more than four (4) six-minute periods in any twenty-four (24) hour period. Visible emissions from this source shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (6-minute average).

TAPCR 1200-03-05-.03(6) and TAPCR 1200-03-05-.01(1)

Compliance Method: The permittee shall assure compliance with the opacity standard by utilizing the opacity matrix dated June 18, 1996, as amended on September 11, 2013, that is enclosed as **Attachment 1**. Reports and certifications shall be submitted in accordance with **Condition E2** of this permit.

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

43-0021-18 Solution	<u>Electrolytic Cells Process</u> - Production of Manganese Dioxide (MnO₂) Chip from Purified Manganese Sulfate
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Conditions E13-1 through E13-3 apply to this source.

- E13-1.** The total usage of manganese sulfate solution for this source shall not exceed **392,300** pounds per hour, on a daily average basis.

TAPCR 1200-03-09-.03(8)

Compliance Method: A log of the usage of manganese sulfate solution, in a form that readily assure compliance with this condition, must be maintained at the source location and kept available for inspection by the Technical Secretary or his representative.

- E13-2.** Fugitive emissions of sulfuric acid (H₂SO₄) from this source shall not exceed **2.03** pounds per hour, on a daily average basis.

TAPCR 1200-03-07-.07(2)

Compliance Method: Compliance with this limitation shall be demonstrated by compliance with **Condition E13-1**.

- E13-3.** Visible emissions from this source shall not exhibit greater than 20 percent (20%) opacity, except for one (1) six-minute period in any one (1) hour period, and for no more than four (4) six-minute periods in any twenty-four (24) hour period. Visible emissions from this source shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (6-minute average).

TAPCR 1200-03-05-.03(6) and TAPCR 1200-03-05-.01(1)

Compliance Method: The permittee shall assure compliance with the opacity standard by utilizing the opacity matrix dated June 18, 1996, as amended on September 11, 2013, that is enclosed as **Attachment 1**. Reports and certifications shall be submitted in accordance with **Condition E2** of this permit.

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

43-0021-20	<u>Shot Blast Cleaning Operation with Cartridge Dust Collector Control – Exhausting to Interior of Building</u>
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Conditions E15-1 through E15-3 apply to this source.

E15-1. The stated design input capacity for this shall not exceed **2,500** pounds per hour of metal cathode frames and **20** pounds of steel shot per hour. Any increase in the capacity will require a construction permit.

TAPCR 1200-03-09-.03(8)

Compliance Method: Compliance with this condition shall be assured by annual certification, as required in **Condition E2(b)**.

E15-2. Particulate matter emitted from this source shall not exceed **0.56** pound per hour. This emission limitation is established pursuant to Rule 1200-03-07-.01(5) of the Tennessee Air Pollution Control Regulations and the information contained in the agreement letter December 5, 2003, from the permittee.

TAPCR 1200-03-07-.01(5)

Compliance Method: The baghouse shall be functioning at all times when blasting is taking place and this source shall be deemed in compliance so long as it exhausts into the working area of the building. A permit modification will be required if the company wants to vent this source directly to the ambient air.

E15-3. Visible emissions from this source shall not exhibit greater than 20 percent (20%) opacity, except for one (1) six-minute period in any one (1) hour period, and for no more than four (4) six-minute periods in any twenty-four (24) hour period. Visible emissions from this source shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (6-minute average).

TAPCR 1200-03-05-.03(6) and TAPCR 1200-03-05-.01(3), agreement letter dated December 5, 2003, from permittee

Compliance Method: This source shall be deemed in compliance with this requirement so long as it exhausts into the working area of the building.

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

43-0021-24	<u>Five (5) Diesel-Fired Emergency Stationary Compression Ignition (CI) Internal Combustion Engines (ICE) – Subject to the requirement of NSPS Subpart IIII and NESHAP Subpart ZZZZ</u>
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Conditions E16-1 through E16-16 apply to this source.
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E16-1. Pursuant to 40 CFR §63.6585, stationary compression ignition (CI) reciprocating internal combustion engines (RICE) located at a major source of hazardous air pollutant (HAP) emissions are subject to 40 CFR Part 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. The permittee shall meet the requirements of 40 CFR Part 63, Subpart ZZZZ, by meeting the requirements of 40 CFR Part 60, Subpart IIII. No further requirements apply for the emergency engine under 40 CFR Part 63, Subpart ZZZZ.

40 CFR §63.6590(c), TAPCR 1200-03-09-.03(8), TAPCR 0400-30-39-.01(2), and TAPCR 0400-30-38-.01(1)(b)102

E16-2. New (manufactured after April 1, 2006) stationary compression ignition engines are subject to regulations under 40 CFR Part 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines including any and/or all applicable emission limitations, notifications, compliance options, records, reports, etc. including, but not limited to, the requirements in **Conditions E16-3 – E16-14**. The permittee's emergency use engines identified in the description above shall achieve compliance of the following conditions upon start-up.

40 CFR Part 60, Subpart IIII, TAPCR 0400-30-39-.01(2), and TAPCR 1200-03-09-.03(8)

- E16-3.** The permittee of 2007 model year and later emergency stationary CI ICE that are not fire pump engines with a displacement of less than 10 liters per cylinder, a maximum engine power greater than or equal to 37 KW (50 HP), and a maximum engine power less than or equal to 2,237 KW (3,000 HP) must comply with the emission standards for the same model year and maximum engine power in 40 CFR §89.112 and 40 CFR §89.113 for all pollutants beginning in model year 2007.

40 CFR §60.4202(a)(2) and 40 CFR §60.4205(b)

Compliance Method: Compliance with this requirement is assured by compliance with **Condition E16-6**.

- E16-4.** The permittee must use diesel fuel that meets the requirements of 40 CFR §60.4207(b) and 40 CFR §80.510(b) & (c). The diesel fuel used for this source is subject to the following per-gallon standards:

A sulfur content of 15 parts per million (ppm) maximum and cetane index or aromatic content, as follows: a minimum cetane index of 40; or a maximum aromatic content of 35 volume percent.

The permittee shall maintain purchase receipts, vendor certifications, material safety data sheets (MSDS), or other records to demonstrate that all fuel purchased for this source meets the requirements of this condition (any fuel labeled as ultra-low sulfur non-highway diesel fuel or ultra-low sulfur highway diesel fuel meets these requirements). These records shall be made available to the Technical Secretary for inspection upon request. These records must be maintained for a period of at least five (5) years from the purchase date.

TAPCR 1200-03-10-.02(2)(a)

- E16-5.** The permittee of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines must install a non-resettable hour meter.

40 CFR §60.4209(a)

- E16-6.** The permittee must comply by purchasing an engine certified to the emission standards in **Condition E16-3** for the same model year and maximum engine power. The permittee must do all of the following, except as provided in **Condition E16-8**:

- (a) Install and configure the engine according to the manufacturer's emission-related specifications;
- (b) Operate and maintain the emergency stationary ICE and control device (if present) according to the manufacturer's emission-related written instructions;
- (c) Change only those emission-related settings that are permitted by the manufacturer; and
- (d) Meet the requirements of 40 CFR Part 89, 94 and/or 1068, as applicable.

40 CFR §60.4211(a) and (c)

- E16-7.** The permittee must operate the emergency stationary ICE according to the requirements in (a) through (c) of this condition. In order for the engine to be considered an emergency stationary ICE under 40 CFR Part 60, Subpart IIII, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in (a) through (c) of this condition, is prohibited. If the permittee does not operate the engine according to the requirements in (a) through (c) of this condition, the engine will not be considered an emergency engine under 40 CFR Part 60, Subpart IIII and must meet all requirements for non-emergency engines:

- (a) There is no time limit on the use of emergency stationary ICE in emergency situations.
- (b) The permittee may operate the emergency stationary ICE for any combination of the purposes specified in (b)(i) of this condition for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by (c) of this condition counts as part of the 100 hours per calendar year allowed by (b).
 - (i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Technical Secretary for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.
- (c) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in (b) of this condition. Except as provided in (c)(i) of this condition, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

- (i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following, (A) through (E), are met:
 - (A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.
 - (B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
 - (C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
 - (D) The power is provided only to the facility itself or to support the local transmission and distribution system.
 - (E) The permittee identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the permittee.

40 CFR §60.4211(f)

- E16-8.** If the stationary ICE and control device (if present) is not installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions, or the emission-related settings are changed in a way that is not permitted by the manufacturer, the permittee must demonstrate compliance by the following:

for < 100 HP	for 100 – 500 HP	for > 500 HP
<p>Keep a maintenance plan and records of conducted maintenance to demonstrate compliance and, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions.</p> <p>In addition, if the permittee does not install and configure the engine and control device according to the manufacturer's emission-related written instructions or changes the emission-related settings in a way that is not permitted by the manufacturer, the permittee must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of such action.</p>	<p>Keep a maintenance plan and records of conducted maintenance and, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions.</p> <p>Conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after a change to emission-related settings in a way that is not permitted by the manufacturer.</p>	<p>Keep a maintenance plan and records of conducted maintenance and, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions.</p> <p>Conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after a change to emission-related settings in a way that is not permitted by the manufacturer.</p> <p>Conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter, to demonstrate compliance with the applicable emission standards.</p>

40 CFR §60.4211(g)

- E16-9.** If the stationary CI ICE is an emergency stationary ICE, the permittee is not required to submit an initial notification. Starting with the model years in the table below, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the permittee must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The permittee must record the time of operation of the engine and the reason the engine was in operation during that time.

The permittee must comply with the labeling requirements in 40 CFR §60.4210(f) and the recordkeeping requirements in this condition for new emergency stationary CI ICE beginning in the following model years:

Engine power	Starting model year
19≤KW<56 (25≤HP<75)	2013
56≤KW<130 (75≤HP<175)	2012
KW≥130 (HP≥175)	2011

40 CFR §60.4214(b)

E16-10. The permittee must operate and maintain the emergency stationary ICE and control device (if present) to achieve the emission standards as required in **Condition E16-13** over the entire life of the engine.

40 CFR §60.4206

E16-11. If the emergency stationary CI ICE has a maximum engine power more than **100 HP** and operates for the purposes specified in **Condition E16-7(c)**, the permittee must submit two (2) annual reports according to the following requirements in (a) through (c) of this condition.

- (a) The report must contain the following information:
- (i) Company name and address where the engine is located.
 - (ii) Date of the report and beginning and ending dates of the reporting period.
 - (iii) Engine site rating and model year.
 - (iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.
 - (v) Hours spent for operation for the purposes specified in **Condition E16-7(c)**, including the date, start time, and end time for engine operation for the purposes specified in **Condition E16-7(c)**. The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.
- (b) The first annual report must cover the calendar year 2017 and must be submitted no later than March 31, 2018. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.
- (c) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Technical Secretary at the following address:

Division of Air Pollution Control William R. Snodgrass Tennessee Tower 312 Rosa L. Parks Avenue, 15 th Floor Nashville, TN 37207	or	Portable Document Format (pdf) email to: Air.Pollution.Control@tn.gov
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40 CFR §60.4214(d)

E16-12. The stated design power output capacity for the internal combustion engines are listed below. Any increase in capacity of any engine will require a construction permit.

Emergency Generator Unit (EGU)	Equipment Name	Serial No.	Manufacturer	Rated Output (kW)	Manufacture Year
GEN-002	ELEC CR #2 Rectifier	CAT000C9JNGP00580	Caterpillar	300	2016
GEN-004	ELEC CR #4 Rectifier	U1150307137	Lincoln 600	20	2015
GEN-005	ELEC CR #5 Rectifier	CAT00C66LN6D03288	Caterpillar	125	2012
GEN-006	ELEC Ore Room Furnace & Calciner Tube Drive	CAT00C44CGLD01610	Caterpillar	60	2013

GEN-007	ELEC Water Storage	CAT00C44CD4B03141	Caterpillar	80	2013
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TAPCR 1200-03-09-.01(1)(d) and the application dated February 06, 2017

E16-13. Pollutants emitted from each unit located at this source shall not exceed the values in the following table.

Generator Engine Emission Standard Table

Emergency Generator Unit (EGU)	Rated Output (kW)	PM Emission Limit (g/kW-hr)	NO _x + NMHC Emission Limit (g/kW-hr)	CO Emission Limit (g/kW-hr)
GEN-002	300	0.2	4.0	3.5
GEN-005	125	0.3	4.0	5.0
GEN-006	60	0.4	4.7	5.0
GEN-007	80	0.3	4.0	5.0

§60.4205(b), §60.4202(a)(1)(ii), §60.4202(a)(2), §89.112(a)

Generator Engine Emission Limit Table

Emergency Generator Unit (EGU)	Rated Output (kW)	Emission Limit (lb/hr)		
		PM	NO _x + NMHC	CO
GEN-002	300	0.13	2.65	2.31
GEN-005	125	0.08	1.10	1.38
GEN-006	60	0.05	0.62	0.66
GEN-007	80	0.05	0.71	0.88

§60.4205(b), §60.4202(a)(1)(ii), §60.4202(a)(2), §89.112(a)

Compliance Method: Compliance with these emission limits are based on compliance with **Conditions E16-6 and E16-8.**

E16-14. The permittee has designated this source as Emergency Power Generators. According to a memorandum dated September 6, 1995, from John Seitz, Director, Office of Air Quality Planning and Standards, "EPA believes that **500** hours is an appropriate default assumption for estimating the number of hours that an emergency generator could be expected to operate under worst-case conditions."

E16-15. The permittee shall keep a log of the number of operating hours for each calendar year for each unit, in a form that readily provides the information required in the following table and shows compliance with **Condition E16-7.**

TAPCR 1200-03-10-.02(2)(a)

Emergency Generator Unit ID:

Year:

Calendar quarter	Operating Hours per Calendar Year			Comments**
	Maintenance checks & readiness testing	Other non-emergency operation	Emergency operation	
Jan - Mar				
Apr - June				
July - Sept				
Oct - Dec				
Total				
** The owner or operator must document how many hours are spent for emergency operation; including what classified the operation as emergency and how many hours are spent for non-emergency operation.				

E16-16. Visible emissions from this source shall not exhibit greater than 20 percent (20%) opacity, except for one (1) six-minute period in any one (1) hour period, and for no more than four (4) six-minute periods in any twenty-four (24) hour period. Visible

emissions from this source shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (6-minute average).

TAPCR 1200-03-05-.03(6) and TAPCR 1200-03-05-.01(1)

Compliance Method: The permittee shall assure compliance with the opacity standard by utilizing the opacity matrix dated June 18, 1996, as amended on September 11, 2013, that is enclosed as **Attachment 1**. Reports and certifications shall be submitted in accordance with **Condition E2** of this permit.

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

43-0021-25 Five (5) Diesel-Fired Emergency Stationary Compression Ignition (CI) Internal Combustion Engines (ICE) and One (1) Natural Gas-Fired Emergency Stationary Spark Ignition (SI) ICE – Subject to the requirements of NESHAP Subpart ZZZZ

Conditions E17-1 through E17-15 apply to this source.

E17-1. This source's five (5) existing (built prior to June 12, 2006) emergency stationary CI RICE and one (1) existing emergency stationary SI RICE are subject to 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, including any and/or all applicable emission limitations, notifications, compliance options, records, reports, etc., including, but not limited to, the requirements as referenced below.

40 CFR 63, Subpart ZZZZ, TAPCR 0400-30-38-.01(1)(b)102 and TAPCR 1200-03-09-.03(8)

E17-2. For each emergency stationary compression ignition RICE, the permittee shall:

- (a) Change oil and filter every 500 hours of operation or annually, whichever comes first; however, the permittee has the option to utilize an oil analysis program as described in 40 CFR §63.6625(i) in order to extend the specified oil change requirement.
- (b) Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and
- (c) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

For each emergency stationary spark ignition RICE, the permittee shall:

- (a) Change oil and filter every 500 hours of operation or annually, whichever comes first; however, the permittee has the option to utilize an oil analysis program as described in 40 CFR §63.6625(i) in order to extend the specified oil change requirement.
- (b) Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first; and
- (c) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

If an emergency engine is operating during an emergency and it is not possible to shut it down in order to perform the management practice requirements as described in (a), (b), and (c) of this condition, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. The permittee must report any failure to perform the management practice on the schedule required and the Federal, State, or local law under which the risk was deemed unacceptable.

40 CFR §63.6603(a)

E17-3. Each affected source that has obtained a Title V operating permit pursuant to 40 CFR Part 70 or 71 must report all deviations as defined in this subpart in the semiannual report required by 40 CFR §70.6(a)(3)(iii)(A) or 40 CFR §71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of Subpart ZZZZ along with , or as part of, the semiannual

monitoring report required by 40 CFR §70.6(a)(3)(iii)(A) or 40 CFR §71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

40 CFR §63.6650(f)

- E17-4.** The permittee must be in compliance with the applicable emission limitations, operating limitations and other requirements in Subpart ZZZZ at all times. At all times the permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Technical Secretary which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

40 CFR §63.6605

- E17-5.** The permittee must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

40 CFR §63.6625(e)(3)

- E17-6.** The permittee must install a non-resettable hour meter to each emergency engine if one is not already installed.

40 CFR §63.6625(f)

- E17-7.** The permittee must minimize each engine's time spent at idle during startup and minimize each engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup apply.

40 CFR §63.6625(h)

- E17-8.** The permittee must operate each emergency stationary RICE according to the requirements in (a) through (c) of this condition in order for the engines to be considered emergency stationary RICE under Subpart ZZZZ. Any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described (a) through (c) of this condition, is prohibited. If any engine is not operated according to the requirements in (a) through (c) of this condition, the engine will not be considered an emergency engine under Subpart ZZZZ and must meet all requirements for non-emergency engines.

(a) There is no time limit on the use of emergency stationary RICE in emergency situations.

(b) The permittee may operate each emergency stationary RICE for any combination of the purposes specified in (i) below for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by (c) below counts as part of the 100 hours per calendar year.

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Technical Secretary for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(c) The permittee (located at a major source of HAP) may operate each emergency stationary RICE for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing as provided in (b) above. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

40 CFR §63.6640(f)

E17-9. The permittee must keep records of the maintenance conducted on each stationary RICE in order to demonstrate that the engine and after-treatment control device (if any) were operated and maintained according to the maintenance plan.

40 CFR §63.6655(e)

E17-10. If the emergency stationary RICE does not meet the standards that are applicable to non-emergency engines, the permittee must keep records of the hours of operation of the emergency engine that is recorded through the non-resettable hour meter. The permittee must document how many hours are spent for emergency operation; including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in **Condition E17-8(c)**, the permittee must keep records of the notification of the emergency situation, and the date, start time, and end time of the engine operated for these purposes.

40 CFR §63.6655(f)

E17-11. The stated design power output capacity ratings for the internal combustion engines are listed below. The Technical Secretary may require the permittee to prove compliance with these rates. Any increase in capacity of any engine will require a construction permit.

Emergency Generator Unit (EGU)	Equipment Name	Serial No.	Manufacturer	Fuel Type	Rated Output (kW)	Manufacture Year
GEN-001B	ELEC CR #1 Rectifier	A-U1931218058	Lincoln	Diesel	28.6	1993
GEN-003	ELEC CR #3 Rectifier	E7310A/001	Caterpillar	Diesel	50	1999
GEN-MEGA	ELEC CR Megacell	KK096055	Miller	Diesel	30	1999
GEN-008	ELEC Calciner Comb Air Fan	2033578	Generac	Diesel	50	1991
GEN-010	ELEC Fire Water Pump	PF4045T542612	John Deere	Diesel	80	2006 (February)
GEN-009	ELEC Admin Building IT	06090612	Briggs & Stratton	Natural Gas	20	2006

TAPCR 1200-03-09-.01(1)(d) and the application dated February 06, 2017

E17-12. Particulate matter emitted from each engine at this source shall not exceed **0.6** pounds per million British thermal unit of heat input (**1.3** lbs/hr combined).

TAPCR 1200-03-06-.02(2)(b)

Compliance Method: Compliance with this emission limit shall be assured by compliance with **Conditions E17-1 and E17-4** of this permit.

E17-13. Sulfur dioxide (SO₂) emitted from this source shall not exceed **1.0** lb/hr combined.

TAPCR 1200-03-14-.03(5)

Compliance Method: Compliance with this emission limit shall be assured by compliance with **Conditions E17-1 and E17-4** of this permit.

E17-14. Only natural gas (for GEN-009 only) and diesel fuel shall be used as fuel for the emergency engines. The sulfur content of the diesel fuel shall not exceed **0.5** percent by weight.

TAPCR 1200-03-14-.03(5)

Compliance Method: The permittee shall either obtain certification from the fuel oil supplier of the sulfur content (by weight) for each shipment of fuel oil, OR alternatively, obtain an annual statement from each fuel vendor that guarantees in advance that all

fuel oil shipments will contain no more than 0.5 percent sulfur by weight. This record shall be kept available for inspection by the Technical Secretary or their representative and be retained for a period of not less than five (5) years.

E17-15. Visible emissions from this source shall not exhibit greater than 20 percent (20%) opacity, except for one (1) six-minute period in any one (1) hour period, and for no more than four (4) six-minute periods in any twenty-four (24) hour period. Visible emissions from this source shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (6-minute average).

TAPCR 1200-03-05-.03(6) and TAPCR 1200-03-05-.01(1)

Compliance Method: The permittee shall assure compliance with the opacity standard by utilizing the opacity matrix dated June 18, 1996, as amended on September 11, 2013, that is enclosed as **Attachment 1**. Reports and certifications shall be submitted in accordance with **Condition E2** of this permit.

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

END OF PROPOSED PERMIT 580350 CONDITIONS

ATTACHMENT 1

**OPACITY MATRIX DECISION TREE for
VISIBLE EMISSION EVALUATION by EPA METHOD 9
dated JUNE 18, 1996, and Amended September 11, 2013**

Decision Tree PM for Opacity for Sources Utilizing EPA Method 9*

Notes:

PM = Periodic Monitoring required by 1200-03-09-.02(11)(e)(iii).

This Decision Tree outlines the criteria by which major sources can meet the periodic monitoring and testing requirements of Title V for demonstrating compliance with the visible emission standards set forth in the permit. It is not intended to determine compliance requirements for EPA's Compliance Assurance Monitoring (CAM) Rule (formerly referred to as Enhanced Monitoring – Proposed 40 CFR 64).

Examine each emission unit using this Decision Tree to determine the PM required.*

Use of continuous emission monitoring systems eliminates the need to do any additional periodic monitoring.

Visible Emission Evaluations (VEEs) are to be conducted utilizing EPA Method 9. The observer must be properly certified to conduct valid evaluations.

Typical Pollutants
Particulates, VOC, CO, SO₂, NO_x, HCl, HF, HBr, Ammonia, and Methane.

Initial observations are to be repeated within 90 days of startup of a modified source, if a new construction permit is issued for modification of the source.

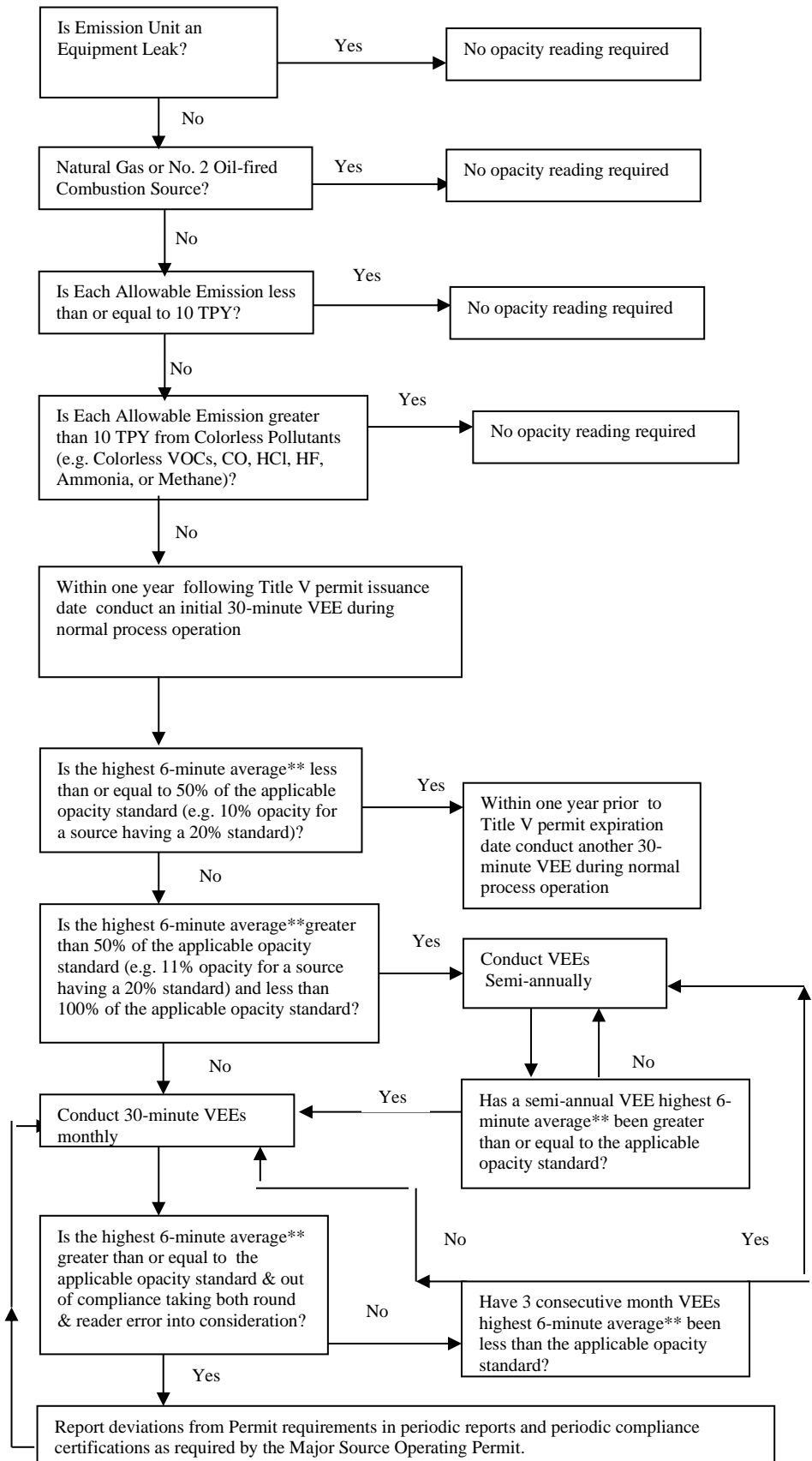
A VEE conducted by TAPCD personnel after the Title V permit is issued will also constitute an initial reading.

Reader Error
EPA Method 9, Non-NSPS or NESHAPS stipulated opacity standards:
The TAPCD guidance is to declare non-compliance when the highest six-minute average** exceeds the standard plus 6.8% opacity (e.g. 26.8% for a 20% standard).

EPA Method 9, NSPS or NESHAPS stipulate opacity standards:
EPA guidance is to allow only engineering round. No allowance for reader error is given.

*Not applicable to Asbestos manufacturing subject to 40 CFR 61.142

**Or second highest six-minute average, if the source has an exemption period stipulated in either the regulations or in the permit.



ATTACHMENT 2

AP-42 Fifth Edition Tables for Natural Gas Combustion Emission Factors

**Table 1.4-1. EMISSION FACTORS FOR SULFUR DIOXIDE (SO₂), NITROGEN OXIDES (NO_x),
AND CARBON MONOXIDE (CO) FROM NATURAL GAS COMBUSTION^a**

Combustor Type (Size, 10 ⁶ Btu/hr Heat Input) (SCC)	SO ₂ ^b		NO _x ^c		CO ^d		N ₂ O ^e	
	Emission Factor (lb/10 ⁶ ft ³)	EMISSION FACTOR RATING	Emission Factor (lb/10 ⁶ ft ³)	EMISSION FACTOR RATING	Emission Factor (lb/10 ⁶ ft ³)	EMISSION FACTOR RATING	Emission Factor (lb/10 ⁶ ft ³)	EMISSION FACTOR RATING
Utility/large Industrial Boilers (>100) (1-01-006-01, 1-01-006-04)								
Uncontrolled	0.6	A	550 ^f	A	40	A	2.2	C
Controlled - Low NO _x burners	0.6	A	79	D	ND	NA	0.64	E
Controlled - Flue gas recirculation	0.6	A	53	D	ND	NA	NA	NA
Small Industrial Boilers (10 - 100) (1-02-006-02)								
Uncontrolled	0.6	A	140	A	35	A	2.2 ^g	E
Controlled - Low NO _x burners	0.6	A	83	D	61	D	0.64 ^g	E
Controlled - Flue gas recirculation	0.6	A	30	C	34	C	NA	NA
Commercial Boilers (0.3 - <10) (1-03-006-03)								
Uncontrolled	0.6	A	100	B	21	C	2.2 ^g	E
Controlled - Low NO _x burners	0.6	A	17	C	15	C	0.64 ^g	E
Controlled - Flue gas recirculation	0.6	A	36	D	ND	NA	NA	NA
Residential Furnaces (<0.3) (No SCC)								
Uncontrolled	0.6	A	94	B	40	B	NA	NA

^a Units are lb of pollutant/10⁶ cubic feet natural gas fired. To convert from lb/10⁶ ft³ to kg/10⁶ m³, multiply by 16.0. Based on an average natural gas fired higher heating value of 1000 Btu/scf. The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value.

SCC = Source Classification Code. ND = no data. NA = not applicable.

^b References 13-14. Based on average sulfur content of natural gas, 2000 gr/10⁶ scf.

^c References 12-13,15-19. Expressed as NO₂.

^d References 5,12-13,17-18,20-21.

^e References 6-7.

^f For tangentially fired units, use 275 lb/10⁶ ft³. Note: This number was originally developed for AP-42 based on limited data. No additional data are available to refine this number.

^g No data; based on the factors for utility boilers.

Table 1.4-2. EMISSION FACTORS FOR PARTICULATE MATTER (PM)
FROM NATURAL GAS COMBUSTION^a

Combustor Type (Size, 10 ⁶ Btu/hr Heat Input) (SCC)	Filterable PM ^b		Condensable PM ^c	
	Emission Factor (lb/10 ⁶ ft ³)	EMISSION FACTOR RATING	Emission Factor (lb/10 ⁶ ft ³)	EMISSION FACTOR RATING
Utility/large industrial boilers (>100) (1-01-006-01, 1-01-006-04)	1 - 5	B	ND	NA
Small industrial boilers (10 - 100) (1-02-006-02)	6.2	B	7.8	D
Commercial boilers (0.3 - <10) (1-03-006-03)	4.5	C	7.4	C
Residential furnaces (<0.3) (No SCC)	0.17	C	11	D

^a References 5,15,22-25. All factors represent uncontrolled emissions. Units are lb of pollutant/10⁶ cubic feet natural gas fired. To convert from lb/10⁶ ft³ to kg/10⁶ m³, multiply by 16.0. Based on an average natural gas higher heating value of 1000 Btu/scf. The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value. SCC = Source Classification Code. ND = no data. NA = not applicable.

^b Filterable PM is that particulate matter collected on or prior to the filter of an EPA Method 5 (or equivalent) sampling train.

^c Condensable PM is that particulate matter collected using EPA Method 202 (or equivalent). Total PM is the sum of the filterable PM and condensable PM. All PM emissions can be assumed to be less than 10 micrometers in aerodynamic equivalent diameter (PM-10).

Table 1.4-3. EMISSION FACTORS FOR CARBON DIOXIDE (CO₂) AND TOTAL ORGANIC COMPOUNDS (TOC) FROM NATURAL GAS COMBUSTION^a

Combustor Type (Size, 10 ⁶ Btu/hr Heat Input) (SCC)	CO ₂ ^b		TOC ^c	
	Emission Factor (lb/10 ⁶ ft ³)	EMISSION FACTOR RATING	Emission Factor (lb/10 ⁶ ft ³)	EMISSION FACTOR RATING
Utility/large industrial boilers (>100) (1-01-006-01, 1-01-006-04)	1.2 E+05	B	1.7 ^d	C
Small industrial boilers (10 - 100) (1-02-006-02)	1.2 E+05	B	5.8 ^e	C
Commercial boilers (0.3 - <10) (1-03-006-03)	1.2 E+05	B	5.8	C
Residential furnaces (No SCC)	1.2 E+05	B	11	D

^a All factors represent uncontrolled emissions. Units are lb of pollutant/10⁶ cubic feet. To convert from lb/10⁶ ft³ to kg/10⁶ m³, multiply by 16.0. Based on an average natural gas higher heating value of 1000 Btu/scf. The emission factors in this table may be converted to other natural gas heating values by multiplying the given factor by the ratio of the specified heating value to this average heating value. SCC = Source Classification Code. ND = no data. NA = not applicable.

^b References 8,15,27-29.

^c References 5,13,15,30.

^d Reference 30: methane comprises 17% of organic compounds.

^e Reference 30: methane comprises 52% of organic compounds.

Table 1.3-1. CRITERIA POLLUTANT EMISSION FACTORS FOR FUEL OIL COMBUSTION^a

Firing Configuration (SCC) ^a	SO ₂ ^b		SO ₃ ^c		NO _x ^d		CO ^e		Filterable PM ^f	
	Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING	Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING	Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING	Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING	Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING
Boilers > 100 Million Btu/hr										
No. 6 oil fired, normal firing (1-01-004-01), (1-02-004-01), (1-03-004-01)	157S	A	5.7S	C	47	A	5	A	9.19(S)+3.22	A
No. 6 oil fired, normal firing, low NO _x burner (1-01-004-01), (1-02-004-01)	157S	A	5.7S	C	40	B	5	A	9.19(S)+3.22	A
No. 6 oil fired, tangential firing, (1-01-004-04)	157S	A	5.7S	C	32	A	5	A	9.19(S)+3.22	A
No. 6 oil fired, tangential firing, low NO _x burner (1-01-004-04)	157S	A	5.7S	C	26	E	5	A	9.19(S)+3.22	A
No. 5 oil fired, normal firing (1-01-004-05), (1-02-004-04)	157S	A	5.7S	C	47	B	5	A	10	B
No. 5 oil fired, tangential firing (1-01-004-06)	157S	A	5.7S	C	32	B	5	A	10	B
No. 4 oil fired, normal firing (1-01-005-04), (1-02-005-04)	150S	A	5.7S	C	47	B	5	A	7	B
No. 4 oil fired, tangential firing (1-01-005-05)	150S	A	5.7S	C	32	B	5	A	7	B
No. 2 oil fired (1-01-005-01), (1-02-005-01), (1-03-005-01)	157S	A	5.7S	C	24	D	5	A	2	A
No.2 oil fired, LNB/FGR, (1-01-005-01), (1-02-005-01), (1-03-005-01)	157S	A	5.7S	A	10	D	5	A	2	A

Table 1.3-1. (cont.)

Firing Configuration (SCC) ^a	SO ₂ ^b		SO ₃ ^c		NO _x ^d		CO ^e		Filterable PM ^f	
	Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING	Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING	Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING	Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING	Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING
Boilers < 100 Million Btu/hr										
No. 6 oil fired (1-02-004-02/03) (1-03-004-02/03)	157S	A	2S	A	55	A	5	A	10	B
No. 5 oil fired (1-03-004-04)	157S	A	2S	A	55	A	5	A	9.19(S)+3.22	A
No. 4 oil fired (1-03-005-04)	150S	A	2S	A	20	A	5	A	7	B
Distillate oil fired (1-02-005-02/03) (1-03-005-02/03)	142S	A	2S	A	20	A	5	A	2	A
Residential furnace (A2104004/A2104011)	142S	A	2S	A	18	A	5	A	0.4 ^g	B

^a To convert from lb/10³ gal to kg/10³ L, multiply by 0.120. SCC = Source Classification Code.

^b References 1-2,6-9,14,56-60. S indicates that the weight % of sulfur in the oil should be multiplied by the value given. For example, if the fuel is 1% sulfur, then S = 1.

^c References 1-2,6-8,16,57-60. S indicates that the weight % of sulfur in the oil should be multiplied by the value given. For example, if the fuel is 1% sulfur, then S = 1.

^d References 6-7,15,19,22,56-62. Expressed as NO₂. Test results indicate that at least 95% by weight of NO_x is NO for all boiler types except residential furnaces, where about 75% is NO. For utility vertical fired boilers use 105 lb/10³ gal at full load and normal (>15%) excess air. Nitrogen oxides emissions from residual oil combustion in industrial and commercial boilers are related to fuel nitrogen content, estimated by the following empirical relationship: lb NO₂ /10³ gal = 20.54 + 104.39(N), where N is the weight % of nitrogen in the oil. For example, if the fuel is 1% nitrogen, then N = 1.

^e References 6-8,14,17-19,56-61. CO emissions may increase by factors of 10 to 100 if the unit is improperly operated or not well maintained.

^f References 6-8,10,13-15,56-60,62-63. Filterable PM is that particulate collected on or prior to the filter of an EPA Method 5 (or equivalent) sampling train. Particulate emission factors for residual oil combustion are, on average, a function of fuel oil sulfur content where S is the weight % of sulfur in oil. For example, if fuel oil is 1% sulfur, then S = 1.

^g Based on data from new burner designs. Pre-1970's burner designs may emit filterable PM as high as 3.0 lb/10³ gal.

ATTACHMENT 3

40 CFR Part 64-Compliance Assurance Monitoring (CAM)

Compliance Assurance Monitoring General Requirements

Operation of approved monitoring (§64.7):

Commencement of operation: The permittee shall conduct all monitoring required pursuant to 40 CFR 64 and this attachment within 180 days of issuance of this permit.

Proper maintenance: At all times, permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

Continued operation: Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Response to excursions or exceedances: Upon detecting an excursion or exceedance, the permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

Determination of whether the permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

Documentation of need for improved monitoring: If the permittee identifies a failure to comply with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or if the results of compliance or performance testing document a need to modify the existing indicator ranges, the permittee shall promptly notify the Technical Secretary and, if necessary, submit a proposed modification to this permit to address the necessary monitoring changes.

Reporting and recordkeeping requirements (§64.9)

General reporting requirements: On and after the issue date of this permit, the permittee shall submit monitoring reports to the Technical Secretary in accordance with **Condition E2** of this permit. The report shall include, at a minimum, the information required by **Condition E2** and the following information, as applicable:

- (1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken; and
- (2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable).

General recordkeeping requirements: The permittee shall comply with the applicable recordkeeping requirements of §70.6(a)(3)(ii) and shall maintain records of monitoring data, monitor performance data, corrective actions taken, and other supporting information required to be maintained under 40 CFR 64. The permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review and does not conflict with other applicable recordkeeping requirements.

Quality Improvement Plan (§64.8)

Based on the results of a determination made under §64.7(d)(2), the Technical Secretary may require the owner or operator to develop and implement a Quality Improvement Plan (QIP) if the procedures used by the permittee in response to an excursion or exceedance are determined to be unacceptable.

Requirement	Description
Indicator	Baghouse pressure drop
Measurement Approach	Observation of pressure measuring device to record differential pressure.
Indicator Range	Baghouse pressure drop must not be less than the pressure drop in inches of water specified in the associated permit condition. Any daily reading that is less than the pressure drop determined in the associated permit condition is considered a deviation.
Data Representativeness	Pressure measurement device is installed per manufacturer's specification to measure differential pressure across the baghouse.
Verification of Operational Status	The pressure-measuring device will be verified as operating before readings are collected. If a problem is detected, maintenance staff will be contacted to return the device to normal operating status.
QA/QC Practices and Criteria	Persons reading the pressure drop will be appropriately trained in taking and recording the readings in a log. Periodic calibration checks and routine maintenance will be performed.
Monitoring Frequency	Continuously monitored by operator and alarm, recorded on operator log at least once daily.
Data Collection Procedures	Designated persons will read and record the pressure drop at least on a daily basis.
Averaging Period	NA

ATTACHMENT 4

Division's MACT Applicability Determination request to EPA dated April 4, 2011

and

**EPA Applicability Determination letter for 40 CFR 63 Subpart VVVV and Subpart
FFFF dated May 26, 2011**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

MAY 26 2011

2011 JUN -1 AM 11:01

Mr. Randall Thompson
Chief
Middle Tennessee Permit Program
Tennessee Department of Environment and Conservation
Division of Air Pollution Control
401 Church Street, 9th Floor Annex
Nashville, Tennessee 37243

Dear Mr. Thompson:

Thank you for your letter dated April 4, 2011, regarding an applicability determination request for the Erachem facility, located in New Johnsonville, Tennessee. Erachem produces manganese dioxide and is a major source of hazardous air pollutants, which are regulated in 40 CFR 63. However, there is uncertainty as to what, if any, major source emission standard applies to the production of an inorganic chemical such as manganese dioxide. Because there is not a major source emission standard for the production of inorganic chemicals, the Tennessee Department of Environment and Conservation examined the applicability section of the National Emission Standard for Miscellaneous Organic Chemical Manufacturing (MON), 40 CFR 63, Subpart FFFF. In §63.2435(c)(5) of the MON, production activities described using the 1997 version of the NAICS code 325188 (except for hydrazine) are not applicable to the MON requirements. Because the NAICS code 325188 is described as inorganic chemical manufacturing, which Erachem is classified as, the TDEC has determined that the facility is not subject to the MON in 40 CFR 63, Subpart FFFF.

Based on the information contained in the April 4, 2011, letter, the Environmental Protection Agency concurs with the TDEC determination that the manganese dioxide production process at the Erachem facility is not subject to the requirements of the MON in 40 CFR 63, Subpart FFFF.

This response was coordinated with EPA's Office of Enforcement and Compliance Assurance and only pertains to the manganese dioxide production process. We encourage TDEC to closely examine other emission sources for potential applicability of other regulations. If further assistance is needed, please contact Lee Page of the Region 4 staff at (404) 562-9131.

Sincerely,

Beverly H. Banister
Director
Air, Pesticides and Toxics
Management Division

cc: Mr. Greg Forte, TDEC



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

DIVISION OF AIR POLLUTION CONTROL
9TH FLOOR, I. & C ANNEX
401 CHURCH STREET
NASHVILLE, TN 37243-1531

April 4, 2011

Certified Mail 7007 2680 0000 5240 0403
Return Receipt Requested

Mr. Lee Page
USEPA REGION 4
61 Forsyth Street, S.W.
Mail Code: 9T25
Atlanta, GA 30303-8960

"MACT Applicability Determination Request"

Dear Mr. Page:

The Erachem facility located in New Johnsonville TN manufactures manganese dioxide (MnO_2). This is an existing Title V facility. This facility *would* be subject to Subpart VVVVVV--National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources *if* it were an Area Source for HAP. The facility seems to meet the GACT Subpart VVVVVV applicability requirements under § 63.11494 - it produces manganese dioxide (manganese compounds are listed in Table 1 to this Subpart as a subject HAP) and this "Table 1 HAP" is present in the feedstocks. Also, this process does not appear to be one of the categories excluded at 63.11494(c). However, based on the allowable quantities of particulate emissions (well above 10 tons per year for MnO_2), this facility is a Major Source for HAPs. It would seem that, if a facility is not subject to a GACT rule only because they are a "major" source, then there would be a MACT rule that would apply to that same type of facility if it were operated as a "major" source. The MACT that seems closest to regulating that type of facility is:

40 CFR 63 Subpart FFFF--National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing

Under the provisions of § 63.2435 "*Am I subject to the requirements in this subpart?*" the following qualifying characteristic is noted:

"(a) You are subject to the requirements in this subpart if you own or operate miscellaneous organic chemical manufacturing process units (MCPU) that are located at, or are part of, a major source of hazardous air pollutants (HAP) emissions as defined in section 112(a) of the Clean Air Act (CAA)."

The description of a MCPU subject to the rule is further defined below:

Mr. Lee Page
April 4, 2011
Page 2 of 2

63.2435(b)(1) states that "The MCPU produces material or family of materials that is described in paragraph (b)(1)(i), (ii), (iii), (iv), or (v) of this section."

63.2435(b)(1)(ii), cited below, lists production of the following class of compounds as a category that is subject to the rule:

"An organic chemical(s) classified using the 1997 version of NAICS code 325, except as provided in paragraph (c)(5) of this section."

The 1997 NAICS lists the following categories :

325 Chemical Manufacturing
325188 All Other Basic Inorganic Chemical Manufacturing

It is our understanding that, although this rule is entitled "Miscellaneous Organic Chemical Manufacturing," some facilities may be included in this category that do not necessarily produce organic compounds. (The Erachem facility does not produce organic compounds, although coal is used in the electric furnaces as a reducing agent.) However, the following rule citation provided below also excludes certain facilities:

§ 63.2435 (c) "The requirements in this subpart do not apply to the operations specified in paragraphs (c)(1) through (7) of this section."

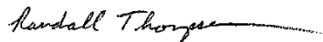
§ 63.2435 (c)(5) includes the following categories: "Production activities described using the 1997 version of NAICS codes 325131, 325181, **325188** (except the requirements do apply to hydrazine), 325314, 325991 (except the requirements do apply to reformulating plastics resins from recycled plastics products), and 325992 (except the requirements do apply to photographic chemicals)."

The company indicates that they are classified as NAICS code **325188**, "Inorganic Chemical Manufacturing." This category of facility is excluded in the rule above. Therefore, this Division has determined that the Erachem (MnO₂) facility is not subject to 40 CFR 63 Subpart FFFF—National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing. Also, there are no other MACT regulations that apply to this facility.

Please advise if you concur with the Division's above determination.

You may call Greg Forte at (615) 532-0548 if you have any questions regarding this matter.

Sincerely,



Randall Thompson, Chief
Middle Tennessee Permit Program

C: Daniel Garver

ATTACHMENT 5

TITLE V FEE SELECTION - APC 36



DEPARTMENT OF ENVIRONMENT AND CONSERVATION
 DIVISION OF AIR POLLUTION CONTROL
 William R. Snodgrass Tennessee Tower
 312 Rosa L. Parks Avenue, 15th Floor, Nashville, TN 37243
 Telephone: (615) 532-0554, Email: Air.Pollution.Control@TN.gov

APC 36

TITLE V FEE SELECTION

Type or print and submit to the email address above.			
FACILITY INFORMATION			
1. Organization's legal name and SOS control number [as registered with the TN Secretary of State (SOS)]			
2. Site name (if different from legal name)			
3. Site address (St./Rd./Hwy.)			County name
City			Zip code
4. Emission source reference number		5. Title V permit number	
FEE SELECTION			
This fee selection is effective beginning January 1, _____. When approved, this selection will be effective until a new Fee Selection form is submitted. Fee Selection forms must be submitted on or before December 31 of the annual accounting period.			
6. Payment Schedule (choose one):			
Calendar Year Basis (January 1 – December 31) <input type="checkbox"/>		Fiscal Year Basis (July 1 – June 30) <input type="checkbox"/>	
7. Payment Basis (choose one):			
Actual Emissions Basis <input type="checkbox"/> Allowable Emissions Basis <input type="checkbox"/> Combination of Actual and Allowable Emissions Basis <input type="checkbox"/>			
8. If Payment Basis is "Actual Emissions" or "Combination of Actual and Allowable Emissions", complete the following table for each permitted source and each pollutant for which fees are due for that source. See instructions for further details.			
Source ID	Pollutant	Allowable or Actual Emissions	If allowable emissions: Specify condition number and limit. If actual emissions: Describe calculation method and provide example. Provide condition number that specifies method, if applicable.

[illegible]